

> Perspective: Omissions, Commissions but Whither...

> Making the Organic Mantra Work

# FARMERS' FORUM

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Issues and Ideas for Indian Agriculture



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# "We are Fed Up"

*"Our life is a succession of paradises successively denied."*

— SAMUEL BECKETT

The recent protests in Berlin against industrialized farming and the planned free trade agreement between the European Union (EU) and the United States, under the banner, "We are fed up", was an important milestone in remonstrations against the current state of affairs around food. As a witness to this call for a worldwide right to food, legal restrictions to protect food and farming, one could not but be touched by the irony of the fact that even as trade issues are resonating across Europe, most Indian farmers are oblivious of the inevitable consequences of trade agreements. Sometimes policies have the ability to forge unity in communities that have for long remained too disunited for their own good. The question is, will new farm policies in India lead to more restlessness and ultimately unify farmers. Clearly this depends on the government of the day.

Given these circumstances, the recent visit of the World Trade Organization (WTO) chief, Roberto Azevêdo to India, is of great import. He travelled to Jaipur to meet the Confederation of Indian Industry (CII), the advocacy body for Indian industry to facilitate its lobbying for New Delhi to sign on the dotted line for a trade agreement on farm produce. Azevêdo, canny and knowledgeable, understands exactly where policies are made and it is for India to be canner and not abandon its objectives of attaining self-sufficiency in food production. As international commodity prices crash, the decibels for India to open its borders for high value, low volume imports will rise. Of critical importance is for this country not to be swayed by the cultivated cacophony in name of reforms.

Farmers are the most optimistic and receptive people in the world and one feels that this optimism is being finally matched by the government's keenness to succeed. India has lost so many opportunities in the last decade of unparalleled growth that one is reminded of Samuel Beckett's take on life being a "succession of paradises successively denied". India's growth story depends on successes on the farm and farms can only succeed if policies are designed with more mettle than in the past. If the farmers' points of view are incorporated, one can certainly look forward to a future where today's children will be infinitely better off than the quagmire in which their forefathers meekly lived in.

The Finance Minister has sought pre-budget

**IF FARMERS' VIEW ARE INCORPORATED INTO POLICY, TODAY'S CHILDREN WILL BE INFINITELY BETTER OFF THAN THE QUAGMIRE IN WHICH THEIR FOREFATHERS MEEKLY LIVED**





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**Q. "IN WHICH MONTH OF THE YEAR ARE FARMERS UPSET FOR THE LEAST NUMBER OF DAYS?"**

**A. "FEBRUARY, BECAUSE THE MONTH HAS THE LEAST NO OF DAYS IN A YEAR"**

if even one per cent of the farmers pay a farmers organization an annual membership fee. Sad though as this may be there is no one to blame but the organizations themselves. The German farmers' organization has a budget of over €10 million and does influence the EU farm policy. Indian farmers' organizations, including BKS, need to do more, be better informed and more vocal in advocating better policies.

Failure to do so would lead to the situation cynically portrayed by a delegate from Africa at the Berlin 'International Green Week' conference: "Which month of the year are farmers upset for the least number of days?" The answer is February, the month with the least number of days. If nothing really changes or if policies become more difficult to digest the time is ripe for farmers to be in perpetual dissent. ●



*Ajay Vir Jakhar*

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*Ajay Vir Jakhar*



# To the Editor

## Playing the industry's tune

Sir, Apropos of G.V. Ramanjaneyulu's piece, 'Helping the Farmer', under your cover story 'Good Manure; Bad Manure' (*Farmers' Forum*, December 2014-January 2015), it appeared to me that only this interlocutor made sense vis-à-vis promoting organic farming. The other contributors, including the editor, *Farmers' Forum*, seem to be working at the behest of industry. All the experts invited for the seminar had close connections with industry. It would be useful if you called for an investigation of what is actually going wrong, as demanded by Ramanjaneyulu. Do some good for the deserving.

**Lalit Bhatt,**  
New Delhi

## Cartels are dangerous

Sir, In response to Vijay Paul Sharma's revelations about Indian purchases and international prices of urea in his contribution to the cover story, 'Good Manure; Bad Manure' (*Farmers' Forum*, December 2014-January 2015), titled 'Wanted: A Long-term Outlook', you should be warned that the international cartel of fertilizer manufacturers and traders will destroy you and your organization. Indian manufacturers are too involved in this money spinning game. These are not people who take such exposures lying down.

**Anonymous**

## Need to resolve problems

Sir, Your editorial 'Unfolding Nightmare for Hapless Farmers' (*Farmers' Forum*, December 2014-January 2015) made for



## Conference call

The conference proceedings 'Good Manure; Bad Manure' (*Farmers' Forum*, December 2014-January 2015) of the seminar on 'Understanding Fertilizer Use & Subsidy', organized by Bharat Krishak Samaj made for most interesting reading. That you have put together so many speakers with so many perspectives on one call is commendable. Please keep up the good work and focus on different aspects of the agriculture scene in India and the world.

**Rajender Rawat,**  
Uttarakhand

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shocking reading with its exposé on the black marketing of urea and DAP. The pathetic account of the Indian farmers selling their produce at less than MSP was equally disturbing. As you rightly say, forecasting, designing subsidies and policies are more important than just allocating finance. Hope the government pays some attention to resolving these menacing problems.

**Rohit Kumar,**  
New Delhi

## The bitter sweet

Sir, The 'Green Fingers' article 'Sugar is Sweet, Sugarcane is Not' (*Farmers' Forum*, December 2014-January 2015) is a telling story of the miserable lives of Indian farmers. It is totally unacceptable that sugar mills do not pay farmers even after picking up their harvest for as long as "from the last season". If such things continue, how can the farmer survive? This happens due to the cosy relationship between mill owners and the areas top-level administrative officers.

**Jagjit Choudhary ,**  
Hissar, Haryana

## Well done

Ramesh Chand on fertilizers, 'Subsidy Structure too Complex for Knee-jerk Response', under your cover story 'Good Manure; Bad Manure' (*Farmers' Forum*, December 2014-January 2015), made me realize how ill-informed I was on the subject. Thank you for your revelations.

**Satish Kumar ,**  
New Delhi

# Tell-Tale Data and the Poor Indian Farmer

Surinder Sud



The agriculture policies of the National Democratic Alliance (NDA) government, and the agriculture-related proposals in its forthcoming first proper full-year budget (2015-16), should ideally be guided by the recently released official data on the “situation of agricultural households in India”. The numbers collected by the National Sample Survey Organization (NSSO) in 2012-13 (70th round) indicate that the agriculture development programmes pursued so far have, by and large, failed to mitigate the plight of Indian farmers.

The bulk of them, especially small and marginal farmers, who constitute 90 per cent of the Indian peasantry, remain poor and heavily indebted. Besides, they lack easy access to technology and institutional credit and do not get remunerative prices for their produce.

Significantly, the average monthly income of the farm households, according to NSSO estimates, is just ₹6,426. This is lower than the earnings of the lowest paid employee in the government or the organized sector. Unsurprisingly, therefore, for the majority of small and marginal farmers (owning



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Consulting Editor  
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*Business Standard*



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**The average monthly income of the farm households, according to NSSO estimates, is just ₹6,426. This is lower than earnings of the lowest paid employee in government**

less than two hectares of land) wage employment, and not farming, constitutes the principal source of income. For about 23 per cent others, earnings from livestock form a significant part of their income.

With this being the ground reality, it is obvious that the government's agriculture agenda should focus on raising farmers' income. The notion that high agricultural growth, as measured in terms of increase in overall agriculture production, leads to higher farm incomes has failed to withstand the test of time. The need is to improve the profitability of Indian agriculture that has been severely eroded.

This calls for simultaneous action on several fronts. The common aim of these actions should be to boost productivity of land, labour and inputs; bring down costs; and ensure remunerative prices for the produce through fair, transparent and efficient marketing.

The coming budget should initiate the process of launching new programmes and reorienting the existing ones towards achieving this goal.

The National Commission on Farmers, headed by the noted farm expert, Dr M. S. Swaminathan, had suggested that agriculture growth should be measured by rise in farm incomes rather than increase in the quantity of output. This suggestion sounds logical when viewed in the backdrop of findings of the NSSO survey and, therefore, merits attention.

Efficient marketing—and not mere announcement of minimum support prices (MSPs) – holds the key to ensuring remunerative prices to producers of all crops across the country. The current system of MSP-based public procurement has failed to achieve this objective because it applies, for all







practical purposes, only to a section of wheat and rice producers in a handful of states. Elsewhere, there is no instrument for assured marketing at reasonable prices. In fact, most farmers are not even aware of the government procurement operations at MSP.

Even among those who know about it, very few avail of this facility. The NSSO numbers indicate that only 32 per cent of paddy sellers were aware of MSP operations and hardly 13.5 per cent managed to sell their stocks to the procurement agencies in 2012.

One way to address this issue is to create or designate more agencies to provide price support by undertaking procurement of all the 20-odd crops for which MSPs are announced and covering all the areas where they are grown and marketed. That may not be practical for logistics and financial considerations though, given the formidable glitches faced in managing the procurement, storage and distribution of just two main staple cereals – wheat and rice – administrative expenses (read subsidies), too, may balloon to unsustainable levels.

### The better way out would be:

- To expand agriculture marketing infrastructure and revamp trading systems with public as well as private investment.
- The existence of more and professionally-run markets would mean greater competition among the buyers of farm produce and easier access for the farmers to the marketing channels, both of which are wanting at present.
- This would also mean loosening the monopolistic hold of commission agents and middlemen in agricultural marketing for the benefit of both producers and consumers of farm goods.
- The wide gap between the prices received by the farmers and those paid by the consumers would also tend to shrink, thus improving the growers' share in the consumer spending.

Besides, there is also need to remove all kinds of hurdles in the inter-state movement of farm goods to create virtually a single nationwide market for agriculture. Such a step has been talked about for a long time but little has actually been





done to achieve this objective. Frequent curbs on stockholding and trade of farm produce, too, work against the farmers. The Essential Commodities Act, under which these restrictions are imposed, should preferably be scrapped or watered down. It should, at the most, be retained on the statute book just as an enabling provision for use under rare circumstances.

Indeed, most of these measures conform to the avowed policies of the NDA government. This is borne out by the following observations and promises made by the finance minister, Mr Arun Jaitley, in his 2014-15 budget speech. He said: "The farmers and consumers' interest will be served by increasing competition and integrating markets across the country. To accelerate setting up a National Market, the central government will work closely with the state governments to re-orient their respective APMC (Agricultural Produce Marketing Committee) Acts to provide for establishment of private market yards/private markets. The state governments will also be encouraged to develop Farmers' Markets in town areas to enable the farmers to sell their produce directly". However, not much headway has been

made in putting these ideas into practice.

Poor returns from farming are a major cause for farmers' heavy dependence on borrowed money for meeting their production as well as consumption expenses. According to the NSSO findings, over half of all agricultural households are under heavy debt. Despite the several-fold rise in the flow of institutional credit to the farm sector in the past decade or so, about 40 per cent of the credit need is still met from informal sources with 26 per cent advanced by the usurious moneylenders who charge interest rates of above 20 per cent. Oddly enough, the extent of indebtedness is far higher in agriculturally progressive areas than in relatively backward ones. The NSSO reckons that it is at 93 per cent in Andhra Pradesh and 82.5 per cent in Tamil Nadu, as against 37 per cent in Chhattisgarh and 17.5 per cent in Assam.

A major lacuna in the disbursal of relatively cheaper institutional finance is that it is least accessible to the small and marginal land-holders, who need it the most. Hardly 15 per cent of the credit needs of these farmers are met from the institutional sources like banks and co-operatives. The informal sector, including the moneylenders, meets the remaining





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and make sure that the banks try to reach out to more farmers, especially those who are not yet linked to the banking sector, to trim the role of informal sector in farm credit.

The much needed productivity increase and cost reduction – prerequisites for making crop farming more lucrative – cannot be achieved without stepping up investment in of new technology and its speedier transfer to the farmers. Though the outlays earmarked for agricultural research and education are hiked in almost every budget, the total investment on this count is still quite meagre, around 0.7 per cent of the agriculture sector's gross domestic product (GDP). Ideally, it should be two per cent of the farm GDP. Budget 2015-16 should, therefore, raise this amount to at least one per cent of the GDP to move towards hitting the ultimate goal of two per cent in the next few years.

Equally essential is to ensure that the technology generated with heavy investment and scientific effort actually reaches the fields and begins to show results. This is not happening in adequate measure at present due chiefly to the disabilities of the state-owned extension services. The NSSO survey indicates that nearly 60 per cent farmers do not get

## There are also indications that more and more institutional finance is finding its way to the same set of farmers whose repayment record is good

85 per cent loan requirement of the tiny cultivators. In the case of larger farmers owning more than 10 hectares of land, nearly 80 per cent of the credit requirements are met from the institutional sources at very low interest rates.

There are also indications that more and more institutional finance is finding its way to the same set of farmers whose repayment record is good. This is thanks to the additional interest subvention of three per cent, offered by the government for prompt repayment, which brings down the effective interest rate for these farmers to just four per cent, against seven per cent for other farmers. This has created a class of farmers who regularly pay back the old debts and get fresh loans at this highly subsidised interest rate. The banks also prefer to deal with those who have good record rather than taking the risk of lending money to the new and unknown customers.

The coming budget should look at this aspect

much technical assistance and knowhow from the government-funded farm research institutes or extension services. They, obviously, have to rely on progressive farmers, media and private commercial agents, such as dealers of farm inputs like seeds, fertilizers and pesticides, for technical information that may or may not be authentic.

The extension services in most states are under-staffed and starved of funds. The technical knowledge of the extension staff, too, is often outdated in the absence of regular interaction with the research centres. The coming budget will do well to incentivize the states to invest more in expanding and strengthening their extension services to reach out to as many farmers as possible. The remote and inaccessible areas, which are virtually out of the radar of state extension agencies and have, consequently, remained agriculturally the least developed, should get special attention.

There is also need to encourage the private sector





to get into the field of agriculture extension. Most farmers would not mind paying for these services if they find them truly useful. Some fertilizer companies, especially those in the co-operative sector, have very good field programmes that can serve as the model for other agro-based industries to emulate. The budget can offer some fiscal sops to private extension services to expand their network and speed up the flow of technology from research centres to farmers' fields.

Given that the livestock sector contributes handsomely to farmers' income and that milk is now the number one agriculture produce in terms of value, leaving rice and wheat behind in this respect, there is need for higher investment in this sector. Scarcity and high cost of feed and fodder has surfaced as a major constraint in the growth of animal husbandry. This is also pushing up the production costs in this sector thus resulting in high prices of mass-consumed animal products like milk, meat and eggs. There is an urgent need to promote feed and fodder production and bring down their costs. This can help supplement farm incomes and stabilize prices of animal products that have continued to swell despite softening of overall food inflation.

Irrigation is another area that has tended to be largely neglected despite its direct and measurable impact on farm productivity and profitability. Public investment in this field has failed to rise to the needed extent due largely to resource crunch faced by most states. As a result, no new major or medium irrigation project has been taken up anywhere in the country for a couple of decades. Many projects under construction have also remained unfinished for want of adequate funding. Though the Centre has been increasing allocations for the accelerated irrigation benefit programme to help expedite the projects that are nearing completion, its impact has not been felt in terms of net expansion in irrigated area through surface water sources.

The bulk of expansion in irrigated land has come in the minor irrigation sector, chiefly in the form of wells and tubewells to extract groundwater. Since this sector is by and large unregulated, it is resulting in indiscriminate exploitation of groundwater, causing the water table to recede to lower depths. Water rates in the medium and large irrigation command areas, too, have remained low in most states as these have not been revised for decades. This is also causing widespread misuse or inefficient use of water that is doing more harm











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than good to soil health and crop productivity. There is, therefore, an urgent need for reforms in the irrigation sector that can be triggered through the budget by offering suitable incentives or linking the grant of central funds with progress of reforms.

Farm insurance is an important means for risk management and risk mitigation. Farmers can guard themselves against potential risks from production losses due to natural or other factors. Though various models of insurance have been tried out in the past, none has really proved economically viable and practically beneficial for the farmers. Most farmers are either unaware of the existing insurance schemes or are unconvinced about their utility as a risk hedging instrument.

The NSSO survey discovered that over 95 per cent of paddy and wheat growers and 99 per cent of sugarcane farmers did not insure their crops in the last couple of cropping seasons. The public and private sector insurance companies should, therefore, be incentivized to enter the agriculture insurance business and come up with workable models that can cover both production and price risks to enjoy the farmers' confidence.

This apart, the overall investment and gross capital formation (GCF) in the agriculture sector, too, merits urgent attention though, *prima facie*, the GCF has risen from 16.1 per cent of agriculture GDP in 2007-08 to 21.2 per cent in 2012-13. Much of the incremental investment has come in the private sector though. The *Economic Survey* 2013-14 presented in Parliament prior to last year's budget had acknowledged the fact that public expenditure had been ceding its share in the GCF to the private sector and has described it as a matter of concern. Worse still, much of the public expenditure goes into subsidies rather than being used for productive purposes.

Where private investment is concerned, the largest increase has been in labour-saving devices. The *Economic Survey* attributed this to the declining rural workforce and rising real wages, especially after the launching of the Mahatma Gandhi National Rural Guarantee Scheme. The government should, therefore, initiate measures in the forthcoming budget to address this issue. It should not only hike public investment but also use it to enhance farm productivity rather than encouraging inefficiencies through subsidies. ●



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**COVER  
STORY**

# INDIAN FARMER AND SPECTRES NAMED **Stress and Distress**

R. Ramakumar and Aparajita Bakshi





**I**t is official now. New data released by the National Sample Survey Organization (NSSO) for 2013 shows that the agrarian distress in rural India is continuing and even intensifying for small and marginal farmers. In the last decade, there has been much talk on inclusive growth, revival of growth rates in agriculture, higher public investment in agriculture and the doubling of agricultural credit. Yet, the new data shows that all these policies have largely bypassed the rural areas, particularly the small and marginal farmers.

Two recent reports, the Situation Assessment Survey (SAS) and the All India Debt and Investment Survey (AIDIS), emphasize the point. SAS 2013 was conducted by the NSSO as a repeat survey of the first SAS in 2003 though the two are not comparable with the definition/concept of a “farmer household”



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poverty line would be between 30 per cent and 40 per cent.

Consider the poorest 50 per cent of the agricultural households. Their average household incomes were actually less than their average consumption expenditure. Similarly, consider all agricultural households that possessed less than 2.5 acres of land, constituting 69.4 per cent of all agricultural households.

Their average household incomes was also less than their average consumption expenditure. Thus, about 50 to 70 per cent of the agricultural households survived on incomes that were inadequate to meet their requirements of consumption expenditures.

What is the record of the procurement schemes? For all crops (except sugarcane), less than five per cent of households reported sale to a government agency/co-operative that assured minimum support prices (MSP). Farmers largely sold their

## In 2013, about 50 to 70 per cent of the agricultural households survived on incomes that were inadequate to meet their requirements of consumption expenditure

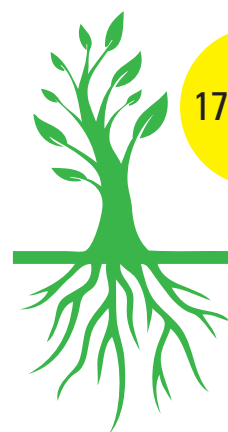
having changed over the two surveys. The present case is based on SAS 2013.

In 2013, agricultural households constituted 57.8 per cent of India's rural households. Cultivation and livestock rearing were the principal income sources for 67 per cent of agricultural households. Respectively, they contributed 47.9 per cent and 11.9 per cent to the total household incomes. Thus, while agriculture remained the most important source of income, rural households also received incomes from varied and multiple sources outside agriculture.

The average monthly income of an agricultural household in 2012-13 was estimated at ₹6,426. The states with highest levels of income were Punjab, Haryana, Jammu and Kashmir and Kerala. The average monthly consumption expenditure per agricultural household was ₹6,223. If we assume an average family size of 4.9, the per capita monthly consumption expenditure was ₹1,270. Rough estimates show that given the decile distribution of consumption expenditures, the proportion of agricultural households below the new Rangarajan

output to private traders. Only 31 per cent of paddy farmers and 39 per cent of wheat farmers were even aware of the MSP scheme. Worse, only 13.5 per cent of paddy farmers and 16.2 per cent of wheat farmers sold their harvest to procurement agencies. The reason: shortage/unavailability of procurement agencies and local purchasers. In fact, independent village surveys conducted by the Foundation for Agrarian Studies, Bengaluru have also demonstrated that the actual prices received by farmers were lower than the MSP.

Agricultural extension and crop insurance were also poorly developed. Only less than five per cent of agricultural households insured their crops. Only 10 per cent of the agricultural households reported access to an extension agent, Krishi Vigyan Kendra or agricultural university. The most important sources of technical advice were “progressive farmers” and “radio/TV/newspapers”. Only one per cent of agricultural households had access to NGOs for technical advice. For “farmer households”, the earlier SAS survey of 2003 had also shown similar results.





In sum, despite problems of methodology and lack of comparability, the SAS shows that the economics of crop cultivation in India remained precarious for a large section of farmers. Successive governments have failed to provide essential services to enhance their agricultural incomes and reduce production and market risks. There are no indications of improvement either by public intervention or due to new policies in the period between 2003 and 2013.

The key results of the All India Debt and Investment Survey (AIDIS) 2013 round, released in December 2014, provides information on the conditions of asset ownership, indebtedness and investment for two sets of households: all “rural households”, and “cultivator households”. All rural households operating at least 0.002 ha of land were treated as “cultivator households”. The AIDIS is organized around 10 years. Unlike the SAS, concepts used in the AIDIS are comparable across time. The argument here thus adopts a longer view and compares data on indebtedness for 1992 and 2013.

The conditions of indebtedness of rural and cultivator households show massive deterioration between 1992 and 2013. There was an increase in the share of rural and cultivator households who were indebted. The share of indebted rural



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## Despite methodological problems and lack of comparability, the SAS shows that the economics of crop cultivation in India remained precarious for a large section of farmers

households rose from 23.4 per cent in 1992 to 31.4 per cent in 2013; the share of indebted cultivator households rose from 25.9 per cent in 1992 to 45.9 per cent in 2013.

Of course, a rise in the share of indebted households need not be an adverse phenomenon in itself. However, what has been striking is that the rise in the incidence of indebtedness occurred alongside a rise in the debt-asset ratios (that shows the extent to which debt is a drain on the value of owned assets). In 1992, debt-asset ratio for rural households was 1.78, which rose phenomenally to 3.23 in 2013. Thus, the data points not just to a higher share of indebted households but also to an intensification of their debt burdens.

From where did they borrow? Between 1992 and 2013, the share of debt outstanding from informal credit sources increased sharply.

- For all rural households, the share of debt

outstanding from the formal sector fell from 64 per cent in 1992 to 56 per cent in 2013.

- For the cultivator households, the share of debt outstanding from the formal sector fell from 66.3 per cent in 1992 to 64 per cent in 2013.
- The most important reason was the withdrawal of commercial banks from lending to farmers and rural areas.
- Between 1992 and 2013, the share of debt outstanding from commercial banks fell from 33.7 per cent to 25.1 per cent for rural households and from 35.2 per cent to 30.7 per cent for cultivator households.

Informal sources of credit have become increasingly powerful in the 1990s and 2000s too.

- If only 32.7 per cent of the debt outstanding of rural households was from the informal sector in 1992, the corresponding share rose to 44 per cent in 2013.







- If one considers cultivator households, the share of debt outstanding from the informal sector increased from 30.6 per cent in 1992 to 36 per cent in 2013.
- Within the informal sector, it was the share of debt from moneylenders that rose most sharply.
- For all rural households, the share of debt outstanding from moneylenders rose from 17.5 per cent in 1992 to 33.2 per cent in 2013.
- For cultivator households, the share of debt outstanding from moneylenders rose from 17.5 per cent in 1992 to 29.6 per cent in 2013.

The results from the AIDIS reveal three realities of rural India in the era of financial liberalization.

- First, through the 1990s and 2000s, financial liberalization has continued to undo the improvements in agricultural credit achieved after bank nationalization in 1969.
- Second, though the UPA government announced a scheme to double the supply of agricultural credit in 2004, the increase in credit flow from banks has not reached the farmers. More than half of the increased credit flow to agriculture has been siphoned off by corporate groups and agri-business companies based in urban and metropolitan areas. A recent paper shows that in West Bengal about 55 per cent of the total agricultural credit outstanding in 2011 was advanced by urban or metropolitan branches!
- Third, ad hoc measures like the debt waiver scheme or relief packages have improved neither the conditions of farmers on the ground nor the overall credit supply to rural areas.

The Left's criticism of neo-liberal agricultural policies stands vindicated with the arrival of the new data. Neo-liberalism has trapped the peasantry between rising costs of cultivation and inadequate output prices. Increased openness to world markets has intensified price volatility and raised price risks. Alongside, neo-liberal policies have also weakened price support systems so as to open farmgate purchases to multinational corporations and retail giants. The new data reaffirm the Left's demand that a comprehensive reversal of neo-liberal policies has to be, necessarily, the starting point of efforts to address India's agrarian distress. ●



**COVER  
STORY**

# From Manifesto to Budget

**Naresh Minocha**







***“Agriculture is the engine of India’s economic growth and the largest employer, and BJP commits highest priority to agricultural growth, increase in farmer’s income and rural development”.***

*– BJP manifesto  
Lok Sabha polls; April 2014.*

**T**he Bharatiya Janata Party’s manifesto in 2014 said that the party would increase public investment in agriculture and rural development. It resolved to “take steps to enhance the profitability in agriculture, by ensuring a minimum of 50 per cent profits over the cost of production, cheaper agriculture inputs and credit; introducing latest technologies for farming and high yielding seeds and linking MGNREGA to agriculture”.



**NARESH MINOCHA**  
Senior economic  
journalist,  
specializing in  
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The list of the BJP’s promises to the agriculture sector is long and cannot be fulfilled in one or two years. Nevertheless, it is natural for farmers and farm experts to expect a road-map for implementation of objectives listed in the manifesto. There can arguably be no better person than finance minister Mr Arun Jaitley to look towards for substantive steps in this direction in the forthcoming budget for 2015-16.

Mr Jaitley’s maiden budget, unveiled in July 2014, provided for token or small allocations towards implementation of certain promises. He had also announced a few schemes, some of which were under implementation for several years. Certain additional schemes are yet to be implemented. Before chipping in with a few ideas for the consideration of the finance minister for the 2015-16 budget, it would be appropriate to know the status of the farm-centric announcements in the budget for 2014-15.

Mr Jaitley had announced a new irrigation scheme named Pradhan Mantri Krishi Sinchayee Yojana with an allocation of ₹1,000 crore. The finance ministry admitted in the winter session of Parliament that a concept note on the scheme is under preparation. In its Mid-Year Economic Analysis (MYEA) 2014-2015 presented to Parliament on December 19, 2014, the ministry also admitted that the ₹50-crore budget announcement relating to the blue revolution and development of domestic cattle breeds are also in concept mode: “Concept Note on the Scheme ‘National Kamdhenu Breeding Centre’ has been approved by Hon’ble Agriculture Minister. EFC (Expenditure Finance Committee) memo has been circulated among the concerned ministries including Department of Expenditure. EFC memo on ‘Blue





revolution-Inland Fisheries' is being prepared".

Even a simple task such as launching a Kisan TV channel with ₹100-crore allocation is yet to take off. "EFC memo received from Prasar Bharati was circulated to all the appraisal agencies and comments of some of the stake holders have been received. SFC (Standing Finance Committee) Meeting under the Chairmanship of Secretary (I&B) is to be held for appraisal of Kisan Channel scheme", says the MYEA.

As for announcements that amount to old wine in new bottle, consider the case of soil health. The budget provided for issue of soil health card to farmers, overlooking the fact that lakhs of such cards have been issued by different states to growers under a centrally sponsored scheme named National Project on Management of Soil Health and Fertility (NPMSHF).

According to the Compendium on Soil Health issued by the agriculture ministry in January 2012: "0.74 crore soil health cards were issued to farmers during 2010-11 compared to about 0.57 crore during 2009-10". The MYEA explains: "EFC meeting held on 28.10.2014. New Scheme Soil Health Card will roll out in coming months". Have the existing soil health cards become soiled?



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## The Mid-Year Economic Analysis 2014-15 has nothing substantial to flaunt for backing up the budget's tall promise to roll out initiatives to herald the second green revolution

Mr Jaitley should address this question in the forthcoming budget speech.

Then again, the MYEA has nothing substantial to flaunt for backing up the budget's tall promise to roll out initiatives to herald the second green revolution. In his budget speech, Mr Jaitley had articulated the government's commitment to sustaining a four per cent growth in agriculture. He stated that "for this we will bring technology driven second green revolution with focus on higher productivity and include 'protein revolution' as an area of major focus".

The MYEA says: "NFSM-Pulses is implemented in 615 districts of 27 states for increasing the production and productivity of pulses. Additional area coverage for increasing pulses production: during *rabi*/summer 2014-15 is also being implemented for ₹224.42 crore. Adaptive research projects are being implemented by national and international research organization

to address various research issues and gaps of potential yield and yield realized at farmers' field. Efforts are being made to promote area expansion in rice fallows and cultivation of pulses as inter-crop with oilseeds/commercial crops/coarse cereals etc".

The budget announcement to set up Price Stabilization Fund (PSF) to manage volatility in prices of agricultural commodities is turning out to be a damp squib. The MYEA's update on this proposal says: "A draft EFC memo proposing a revolving corpus fund of ₹500 crore for providing working capital to states and to central/state agencies for procurement and distribution of perishable agricultural and horticulture produce. The fund is proposed to be replenished @ ₹100 crore in 2015-16".

The government first shrunk the domain of PSF from agricultural produce to horticultural produce. The PSF's scope has been further reduced to two







staple vegetables in the draft operational guidelines for PSF released by the agriculture ministry on January 12, 2015 for seeking public comments! The draft says: “To begin with, interventions would be supported for onions and potato only. However, other commodities may be added later”.

The draft observes: “Horticultural commodities are not covered under the minimum support price (MSP) mechanism and therefore, the farmers, at times, do not even recover their cost of cultivation, being fully dependent upon the market for disposal of their produce. As a result, farmers suffer the most on account of steep fall in prices”.

If the budget created illusions of a vertical take-off to utopia among stakeholders, the MYEA

**Table: Trends in the Country's Gross Domestic Product & Agricultural GDP**

Period	Total GDP	Agriculture & Allied Sector GDP
2007-08	9.3	5.8
2008-09	6.7	0.1
2009-10	8.6	0.8
2010-11	8.9	8.6
2011-12	6.7	5.0
2012-13 (RE)	4.5	1.4
2013-14 (PE)	4.7	4.7

Source: Parliamentary Standing Committee on Agriculture, Report on Department of Agriculture & Co-operation's Demand for Grants 2014-15, 18 December 2014

**Table: Decline in Share of Agriculture & Allied Sectors in the Country's Gross Domestic Product**

(Rs in crore)

Items	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
GDP of Agriculture and Allied Sectors	6,60,987	7,17,814	7,53,832	7,64,510	8,00,548
Per cent to total GDP	14.6	14.6	14.4	13.9	13.9

Source: Parliamentary Standing Committee on Agriculture, Report on Department of Agriculture & Co-operation's Demand for Grants 2014-15, 18 December 2014



**Table: Annual Rate of Growth in Agriculture Investment and Input Subsidies from 1981-2012 at 2004-05 price (Rs Billion)**

Average	Public GCFA	Private GCFA	GCFA	Input Subsidy	Irrigation	Credit	Power	Fertilizer	Input Subsidy
1981-1989	105	231	336	347	36	19	54	235	618
1990-1999	92	329	422	476	62	14	201	195	744
2000-2011	175	769	945	639	86	47	257	248	825
1981-2011	127	461	588	502	64	29	180	227	739
<b>Annual Rate of Growth (per cent)</b>									
1981-1989	-3.70	1.79	0.14	8.04	8.69	12.36	21.09	4.99	6.13
1990-1999	2.78	3.11	3.06	2.49	2.49	-10.24	11.87	-4.24	1.43
2000-2011	6.38	8.75	8.25	3.18	3.19	9.99	2.33	2.98	1.52
1981-2011	3.27	6.39	5.64	2.60	3.21	3.96	6.65	0.12	1.00

Note: GCFA – Gross Capital Formation in Agriculture

Source: Investment Priority for Poverty Reduction and Higher Agricultural Productivity, a presentation by Centre for the Study of Regional Development, Jawaharlal Nehru University (JNU)

**Table: Number & Area of Operational Holdings as Disclosed in Rajya Sabha (Question dated December 12, 2014)**

Category of Holdings	Number of Holdings			Area			Average Size of Holdings		
	2000-01*	2005-06*	2010-11	2000-01*	2005-06*	2010-11	2000-01*	2005-06*	2010-11(P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Marginal (Less than 1 hectare)	75,408 (62.3)	83,694 (64.8)	92,356 (67.0)	29,814 (18.7)	32,026 (20.2)	35,410 (22.2)	0.40	0.38	0.38
Small (1.0 to 2.0 hectares)	22,695 (19.0)	23,930 (18.5)	24,705 (17.9)	32,139 (20.2)	33,101 (20.9)	35,136 (22.1)	1.42	1.38	1.42
Semi-Medium (2.0 to 4.0 hectares)	14,021 (11.8)	14,127 (10.9)	13,840 (10.1)	38,193 (24.0)	37,898 (23.9)	37,547 (23.6)	2.72	2.68	2.71
Medium (4.0 to 10.0 hectares)	6,577 (5.5)	6,375 (4.5)	5,856 (4.3)	38,217 (24.0)	36,583 (23.1)	33,709 (21.2)	5.81	5.74	5.76
Large (10.0 hectares and above)	1,230 (1.0)	1,096 (0.8)	1,000 (0.7)	21,072 (13.2)	18,715 (11.8)	17,379 (10.9)	17.12	17.08	17.37
All Holdings	1,19,931 (100.0)	1,29,222 (100.0)	1,37,757 (100.0)	1,59,436 (100.0)	1,58,323 (100.0)	1,59,180 (100.0)	1.33	1.23	1.16

No. of Holdings: ('000 Number)

Area Operated: ('000 Hectares)

Average Size: (Hectares)

\* Excluding Jharkhand

Source : Department of Agriculture and Co-operation (Agriculture Census 2010-11, Provisional)  
Agricultural Statistics at a Glance 2013

served as a fizz-out of gas from a hot-air balloon for certain budgetary announcements. This happened during the United Progressive Alliance (UPA) government too. This, despite the fact that there is no substitute for public investment in farming and allied areas, which serves as the most important propeller for holistic growth in agriculture.

A presentation by Centre for the Study of Regional Development, Jawaharlal Nehru University (JNU) says: "Social benefits from agricultural expenditure are far greater than the private producer benefits. Amount spent by private sector tends to be lower than the socially optimal level, and this under-provision creates a rationale

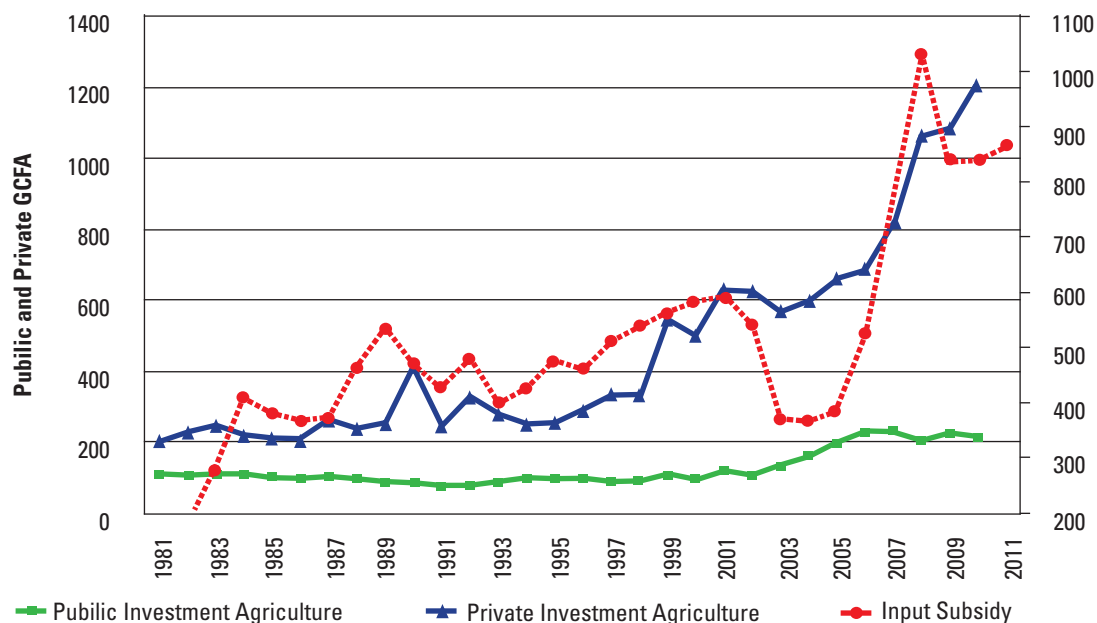
for the public provision of such goods".

The presentation, 'Investment Priority for Poverty Reduction and Higher Agricultural Productivity' given to the National Food Security Mission (NFSM) in November 2014 notes: "Investments in agriculture (both public and private) have increased at a much faster rate during 2000 compared to subsidies; subsidies not crowded out public investment. Investment and subsidy distribution across states continues to be extremely unequal. Relative decline in expenditure on economic heads – agriculture, irrigation and rural development have borne the maximum brunt".

The answers to parliamentary questions during the

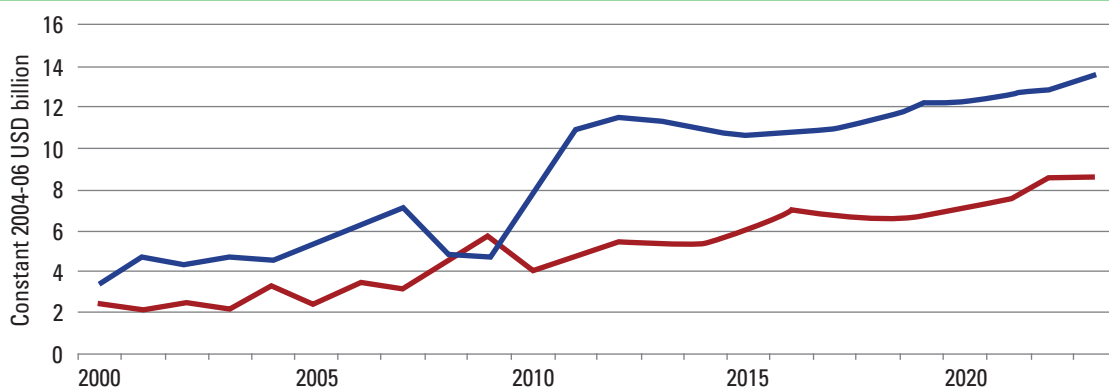


## Public and Private Investment in Agriculture and Input Subsidy, Rs Billion at 2004-05 Price



Source: Investment Priority for Poverty Reduction and Higher Agricultural Productivity, a presentation by Centre for the Study of Regional Development, Jawaharlal Nehru University (JNU) to National Food Security Mission, 10th November 2014

## In real terms India exports and imports will rise, stable on net basis



The country's foreign trade in farm commodities as projected by OECD-FAO Agricultural Outlook 2014-2023

last two sessions confirm the belief that the budget is more a joy-ride for farmers than a flight to *achhe din*. The reply to a precise question raised in Rajya Sabha on December 19, 2014 is an eye-opener. The question was: "Whether Prime Minister's Office has sent any proposal to the ministry for implementation of the report of Swaminathan Commission and provision of MSP at the rate of 1.5 times the cost of agricultural production, if so, the details thereof, and the response of government thereto; and (b) whether government would provide MSP at the rate of 1.5 times the cost of agricultural production from next crop season, if so, the details thereof, and if not, the reasons thereof?"

The official reply: "Swaminathan Commission's Report on Farmers had recommended that the MSP should be at least 50 per cent more than the weighted average cost of production. This recommendation was not accepted by the government as minimum support price is recommended by Commission of Agricultural Costs and Prices (CACP) on objective criteria, considering a variety of relevant factors. It was thought that prescribing an increase of at least 50 per cent of cost might distort the market. A mechanical linkage between MSP and cost of production may be counterproductive in some cases... A committee consisting representatives of the state governments and farmers has been





constituted to examine methodological issues in fixing MSP”.

Does this reply not indicate that the government is back-tracking on BJP’s solemn resolve to ensure a minimum of 50 per cent profits over the cost of production? The government stance also put a question mark over the Prime Minister Mr Narendra Modi’s tweet on this subject sent during the Lok Sabha election campaign. On April 6, 2014, Mr Modi had tweeted: “Why should our farmers not get the right price? Farmers are not begging, they worked hard for it and should get good prices.”

As for other steps being taken by the government to improve the profitability of farming sector, the official reply dated December 12, 2014 says: “The government is implementing various missions, schemes and projects, which facilitate production, availability and distribution of quality seeds and fertilizers to farmers. Details of these initiatives are appended...”.

Consider now the subject of coping with the agrarian crisis and the consequent farmers’ suicides, the reply to a question dated 19 December 2014 says: “Agriculture is a state subject under the Constitution and therefore, states are primarily responsible for development of agriculture sector and welfare of farmers including payment of compensation to the victims of suicides. Government of India has however, taken several steps to revitalize the agriculture sector and improve upon the condition of farming community on sustainable basis by increasing public investment, improving farm practices, rural infrastructure, extension, marketing, etc. Various programmes/schemes for the development of agriculture sector are being implemented in a decentralized manner with flexibility to state governments to formulate and implement appropriate projects to suit their specific requirements...”.

Asked whether the government had taken any

**The Swaminathan Commission had recommended that the MSP should be at least 50 per cent more than the weighted average cost of production. This recommendation was not accepted by the government**

## What if? A fairy tale of good agri-governance

The Agriculture Caring Party (ACP) comes to power at the centre for the first time since Indian independence. The electorate, comprising food producers and consumers, vote for a party with a long-term vision for sustainable agriculture and food security. Unlike other political parties that make rosy promises to farmers prior to elections and backtrack, the ACP is committed to honouring its promises. It stays focused on its commitment to reinvent agriculture, usher in the second green revolution, end the agrarian crisis and make farming a viable platform for building a value chain for manufacturing and services.

The ACP, however, finds it cannot achieve its agri-led agenda for growth as it is outnumbered in the Rajya Sabha. It, then takes a cue from the preceding BJP-led NDA government, which issued 10 ordinances in its first seven months of operations. The ordinances, among other things, liberalize foreign investment in the insurance sector, open up coal mining to private sector with freedom for sale of coal in the open market and provide better deal to non-resident Indians. The agriculture sector does not figure in the NDA’s scheme of ordinance raj.

Armed with a robust majority in the Lok Sabha like NDA-III, the ACP is confident of converting all ordinances into enactments through the channel of joint sitting of both houses of Parliament. The ACP then finds that all NDA’s predecessors, irrespective of political hues had also resorted to promulgation of ordinances on various issues due to several reasons, including corporate lobbying. The only common feature of all political regimes was neglect of agriculture-focused legislation.

The ACP then asks the Ministry of Agriculture and Co-operation and other related ministries to identify long-pending and urgent issues that require legal interventions. Even before the list is prepared, an MP finds that two bills, crucial for heralding the second green revolution, are pending in the Rajya Sabha. These are the Seeds Bill, 2004 that was introduced by UPA-I in December 2004 and the Pesticides Management Bill 2008 that was also introduced by UPA-I in October 2008.

At a meeting of the ACP’s Parliamentary Board, the same MP tells his colleagues that these bills were gathering dust in Parliament because the agriculture sector does not know the ‘ABCD of lobbying’. The farmers only know how to agitate







and when they agitate forcefully, the government of the day listens. The concern peters out shortly after farmers agree to go back to farms. This has been the pattern since the Independence.

In the case of the two pending bills, the farmers did not lobby and the lobbyist in the seeds and pesticides industry could hardly outsmart the big brothers of the corporate world, who had ready access to the government machinery right from the Prime Minister to a section officer in any ministry.

The ACP decides to act responsibly. Instead of opting for easy option of promulgating ordinances, it revives the seed and pesticides bills in Rajya Sabha. It updates them by moving official amendments to the bills. Knowing well that it would fail to get the bills passed in Rajya Sabha, it sticks to good constitutional governance instead of standing on false prestige. After the bills are defeated in the Upper House, it calls for joint sitting where both the bills are passed, thereby paving the legal way for the second green revolution.

The ACP updates the Seeds Bill by incorporating provisions for safe trail of genetically engineered seeds and their commercial launch, overriding restrictive provisions that exists any other law. As the ACP is an environmentally-responsible party, it wants

farmers to embrace genetically modified seeds that are tailored for efficient use of water and fertilizers and can withstand many pests and adverse weather and agronomic factors. The updated Pesticides Management Bill also facilitates integrated pest control techniques. It also creates robust ecosystem for development and launch of new formulations.

The Ministry of Water Resources also pitches before the cabinet for its approval of two important draft legislations, National Water Framework Bill and River Basin Management Bill that were unveiled for public comment by UPA-II in June 2013. The bills are crucial for not only fulfilling the UPA's but also the NDA's vision for bringing water to every field as well as for industrial development and meeting other commercial and residential requirements.

Though agricultural marketing is a state subject, yet the ACP opts for public consultation to explore options for giving a legal framework for transforming the country into a seamless national agricultural market.

Why can this fairytale be transformed into a resolute action by the Modi sarkar? The least it can do is to announce its intent to separately roll-out a roadmap to 're-architecture' farm laws.





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steps to transform wastelands into cultivable land, the reply to a question dated December 19, 2014 says: "As per the Seventh Schedule of the Constitution of India, land and its management comes under the purview of state governments and, therefore, it is for the state governments to take suitable steps to convert cultivable waste land into agricultural land".

A glance through such replies shows absence of any innovative initiative so far. The government has perhaps reserved new ideas on agriculture for the forthcoming budget speech of Mr Jaitley. While no one knows what the finance minister has up in his sleeves for the farming sector he is certainly open to all ideas from all quarters.

One good idea to pitch before Mr Jaitley is to make quantum jump in allocations for soil health, organic manure and bio-fertilizers to coincide with observation of 2015 as International Year of Soils (IYS) by Food and Agriculture Organization (FAO). Experience shows that annual allocations for protection of soil health and production of both organic and bio-fertilizers are woefully inadequate.

The sufficient and timely availability of diverse grades of these two fertilizers at affordable prices is required not only to protect soil health but also improve crop yields. The government should unveil a scheme to enhance the participation of agri-input

companies, hotels, big restaurants, *mandis* and waste processing units in the production of organic fertilizers manufactures from food wastes.

It should also give a big boost to production of bio-fertilizers by agri-entrepreneurs, co-operatives and farmer producer companies as this business requires modest capital investments. The scheme should facilitate marketing of the products of these ventures by chemical companies that have vast market reach. As for soil protection, the centre should create enact a law that would enable the states to levy tax on fallow land in both urban and rural areas. This would also force real estate companies to cover their acquired land parcels with greenery.

Mr Jaitley must show the political spine to bring urea under nutrient-based subsidy (NBS), an idea that has been recommended time and again by all stakeholders including official committees. If it cannot be done in one shot, let it done in a span of three years or so. The NBS scheme should cover all nutrients and all fertilizers including liquid ones. This would facilitate balanced application of fertilizers, thereby improving yields and minimizing damage to soils caused by imbalanced application of nutrients.

To ensure that companies pass on the subsidy to farmers and to free them from serving as conduits for subsidy, the government should revive the idea



of cash transfer of subsidy to farmers and share-croppers. A clear and firm road-map in this realm would free the companies from the blemish of pocketing a part of subsidy. The resulting decontrol of fertilizer prices would facilitate massive and diversified investment in fertilizer sector.

Decontrol should signal the entry of refineries in production of urea through the gasification of petroleum coke that they produce as by-product in large volumes. Put simply, fertilizer subsidy reforms can create generate multiple benefits. It is the political short-sightedness that is preventing the flow of benefits to farmers, industry and the unemployed persons. These reforms would thus also facilitate increase in application of liquid fertilizers along with irrigation water through drip irrigation systems.

Another immediate challenge that should attract Mr Jaitley's attention is the incessant fragmentation of farm holdings due to population explosion. The country is entering the age of micro-farming in the increasingly globalized economy. The Indian Council of Agricultural Research (ICAR) in its

shrinking farms is a dramatic increase in yields, for which genetically modified (GM) seeds are the pre-requisite. The NDA government has embraced the UPA's policy paralysis in this area. Let the budget serve as platform for ending the current freeze on field trial and commercial launch of GM seeds.

- The budget should also provide for a scheme for promotion of companies that would lease the entire range of farm equipment to small and marginal farmers.
- The long-term solution to land and population pressure lies in vertical farming. The budget should provide for additional R&D allocation for this relatively unexplored terrain.
- The government should also create awareness about the scope and importance of growing creepers along with ornamental plants near the boundary walls/fences of buildings across the country. This should improve the supply of availability of vegetables and fruits borne by creepers.

More such initiatives can be thought of to ward off the impending slow-down in the country's agricultural growth. According to the OECD-

**The average size of landholding in India would be mere 0.68 ha in 2020 and would be further reduced to a low of 0.32 ha in 2030. This is a very complex problem**

Vision 2030 released in January 2011 says: "The average size of the landholding declined to 1.32 ha in 2000-01 from 2.30 ha in 1970-71, and absolute number of operational holdings increased from about 70 million to 121 million. If this trend continues, the average size of landholding in India would be mere 0.68 ha in 2020 and would be further reduced to a low of 0.32 ha in 2030. This is a very complex and serious problem, when share of agriculture in gross domestic product is declining, average size of landholding is contracting (also fragmenting), and number of operational holdings are increasing".

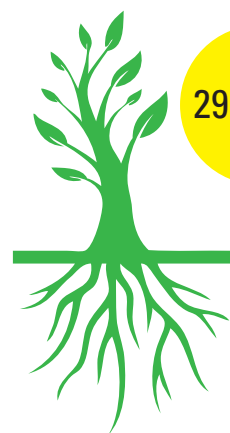
Further, "Declining size of landholdings without any alternative income augmenting opportunity is resulting in fall in farm income, causing agrarian distress. A large number of smallholders have to move to post harvest and non-farm activities to augment their income. The research focus should be to evolve technologies and management options to suit needs of smallholders' agriculture and also to involve them in agri-supply chain through institutional innovations".

The easiest way to increase income from

FAO Agricultural Outlook 2014-2023 released in July 2014, Indian annual agricultural growth is projected to decline from 4.6 per cent in the last decade to three per cent over the next decade. Even the lower growth would be enough to raise per capita supplies considerably.

In a chapter titled 'Feeding India: Prospects and Challenges in the Next Decade', the Outlook adds: "Key uncertainties in this scenario lie in India's macro performance, productivity/yield growth and the viability of government programmes. Sustained high income growth is the most critical ingredient to realization of the outcomes of the outlook scenario. But so is continued strong productivity growth, which, given the policy framework, will be key to preventing higher domestic prices that would reduce consumption". The slow-down in growth can obviously constrain the export of farm commodities and processed food products.

Mr Jaitley has thus a policy and investment challenge at hand to overcome risks of slow-down in agricultural growth, apart from honouring the BJP's polls promise in letter and spirit. ●





# Small Farm Big Business

Laveesh Bhandari

**T**he data is well known – average farm size has declined from 2.3 hectare (ha) in 1970-71 to 1.37 ha in 2000-01 and by now should be less than one hectare. Small and marginal farmers account for more than 80 per cent of total farm households when last counted and may now very well be closer to 90 per cent. Also a very large proportion of the agriculture production is accounted for by such households across most major commodities. Numbers being what they are, agriculture policy necessarily has to be seen from the lens of the small farm first and, arguably, India's agriculture policy should simply be a small farm and small farmer policy.

The problem that has faced policy-makers has essentially been what can possibly make these small farms and small farmers self-sustainable, given the



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small size of their acreage. A few weak policy measures such as compulsory land consolidation, preventing land conversion and such others have been suggested in the past but measures have been half-hearted even if they were to work.

The solution lies in first understanding the small farm and small farmer. First, consider additional income sources. The small size of the farm is not typically adequate to meet the requirements of the household.

Therefore, many households resort to other tasks/occupations in addition to farming for their incomes. Women and men in such households will take up daily wage jobs, some may send their children to other places for income. Yet others may have a small village shop, while some may have women involved in *bidi*-rolling or basket-making and such other activities. Indeed, there are many activities that





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## If the sale price is 'x' the bulk of it should be due to efforts of the farmer and accrue to him and not to the input supplier or the transporter or the trader

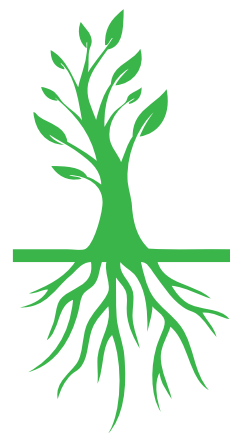
would be a by product and poverty elimination would be a necessary outcome. Policy is driven in a different manner though. The need to provide a large enough number of calories partially because that's what defines poverty, gave rise to the need to provide budgetary and policy support foodgrains in many different ways.

The need for quick increases in foodgrain production requires a focus on wheat and rice, which are also the easiest to store. Perhaps consequently, minimum support prices in selected commodities and a non-uniform subsidy regime took hold, favouring a few much more than others. This was all put up in the seventies and even earlier. Since then, agriculture policy is refusing to change with the requirement of the times.

What is the solution? The first is to ensure that greater value is added within the small farm, while recognizing that the small farm household may have few assets or resources to invest in the farm. For greater value to be added, the produce and technology will need to be different. The focus will need to shift away from homogenous technologies meant for the large farm and move towards technologies meant for the small one. For greatest value addition at the farm, productivity will need to be increased. Increasing productivity is, however, only possible when land quality and farming practices are in sync with the produce being desired as well as the abilities of the farming household. More specifically, therefore, a set of policies that are designed exclusively for the small farm should be considered.

### Improve soil quality

Soil quality can best be improved through good soil management practices at the local level and adequate recharge of required soil nutrients including micro-nutrients as well. Soil quality management has to be done at the farm level and will need to be supported by village level efforts. The first step of this will need to be information; namely, what does the soil require? Soil cards that comprise of farm level



are typically undertaken that households are unable to report in poorly designed surveys.

Second, given that scales are low in small farms, they can only become viable if they have a high enough value added on the farm. In other words, if the sale price is 'x' the bulk of it should be due to efforts of the farmer and accrue to him and not to the input supplier or the transporter or the trader. In India typically though, the technology being used is such that the farmer is unable to deliver a high enough value addition.

Both these factors are neither strengths nor weaknesses; they are simply characteristics of a small farm but they become weaknesses under the current policy regime.

This is because the macro factors have been driving agriculture policy in India and not the welfare of the small farmer. It could be argued that if the small farmer is taken care of, food security



information on the condition of the soil could be that essential first informational step.

However, that is not all. For many decades now relative prices have been favouring the overuse of some fertilizers and under-use of others. This will require rethinking the subsidy regime. The use of local level biomass for enhancing soil productivity also requires local level information and local level action. The government, therefore, will need to move away from the one-size-fits-all subsidy regimes and move towards enabling improved information and enabling facilitative institutions at the village and local level.

### Access to markets

Agriculture policy should not be divorced from urban development because, when it is, both urban and agriculture development suffer. The inordinately large number of middlemen often held accountable for the poor state of agriculture; this occurs not just because the farmer is poor and perhaps ill-informed but because the middlemen also perform an aggregation function. Once produce from many small farms (of differing quality and variety) is aggregated in broadly similar lots, it is then also finally disaggregated before it reaches individual households. This function is done by wholesalers and retail vendors in urban areas.

The solution, therefore, is to circumvent the aggregation process by directly putting the farmer in touch with the individual user. For long now fresh fruits and vegetables have been sold from roadside and typically illegal or unlicensed vendors. These vendors



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## Space allocation for vendors of fresh produce at the neighbourhood level is essential for the small farmer. For example, farmers' markets are the rising trend globally

are the end points of a large chain of middlemen. The lack of space allocation for fruit and vegetable vendors in the informal sector leads to greater percolation of revenues to those who control the space. Not only the consumer, even the farmer loses.

Space allocation for vendors of fresh produce at the neighbourhood/community level is, therefore, an essential ingredient for the small farmer. For example, take farmers' markets, which are the rising trend globally. Farmers come together to directly sell their fresh produce to the consumers in a neighbourhood. This is not possible in India, as urban spaces are typically allocated in an illegal manner through a

corruption laced mechanism. India could go further – allocate spaces in urban areas to specific Panchayati Raj Institutions (PRIs) for setting up markets for their farmers. This is just one of many possibilities; there are many more that can directly reduce middlemen and provide greater returns to farmers. Removing legal and infrastructure hurdles to trade will be an integral part of this process.

### Water management

The need for water on a per-unit area may be the same but the water requirements can diametrically differ between large and small farms. This has to







do with the greater risk faced by a small farmer than a larger one. As is well known, risk fearing users will tend to over-use in case of uncertainty and that is what small farmers will naturally do. When there is uncertainty of supply, be it of electricity or canal water, small farmers may also react by concentrating on safer crops or overusing the water when it is available.

The mechanisms are different, but the earnings are lower in both cases. Pumps, whether electric or diesel, whether owned or shared, have become an essential part of the small farmers source of irrigation. However, this dependence would become more fruitful if it was accompanied by certainty of supply of the energy source. Moreover, the need to recharge sub-surface water rapidly enough is being felt across India and this can best be done at the village or habitation level through

local co-operative efforts.

In other words, whatever be the policy measure, there are essentially three ingredients.

- **First:** Provide information to the small farmer,
- **Second:** Remove hurdles through legislative reforms,
- **Third:** Decentralize all activities related to agriculture down to the PRIs.

There will be many other large and small measures but it is time that India moved away from a one-size-fits-all approach in agriculture and thought about the small farmer who is a heterogeneous entity. Poverty can only be addressed in this manner. Foreign Direct Investment in retail and other such reforms are actually small business compared to the large income supplements that are possible with a small farmer-oriented agriculture policy. ●





OUTLOOK

# 'LANN'ING SOUTH ASIA Need for New Optics

Biraj Swain and Ranvir Singh



*“The returns to a political analysis for nutrition are likely to be high – many actors, with different agendas, different power levels, amid a sea of invisibility and asymmetric information – sounds like a definition of Politics 101. We talk about the need to understand politics if we are to build and sustain commitment and then turn it into impact. We focus on framing, evidence, governance, accountability, commitment, capacity and resource mobilization. Malnutrition is more than a technical, health, policy, programme and economic issue, it is political.”*

*– Prof Lawrence Haddad*

*June 2013, The Lancet*



**L**inking Agriculture Natural Resources and Nutrition (LANN), in South Asia has become an immediate imperative. Why South Asia, why now? It is worthwhile to place 'Lann'ing in context of the current status of the Millennium Development Goal (MDG) as MDG I is getting phased out and inter-country negotiations are on for the next phase: Sustainable Development Goals.

Ending extreme poverty and hunger is MDG I. The State of Food Insecurity (SOFI), 2012 clearly stated that on the basis of the hard labour conditions and recommended dietary requirements, 2.6 billion are hungry globally. Of those who are routinely hungry, 336 million people live in the South Asia Region (SAR) that represents amongst the highest rates of hunger in the world, with emerging threats intensifying the situation. Even these figures underestimate the true extent of food insecurity, which includes hidden hunger: micronutrient deficiencies that, beyond calories, limit potential for active and healthy lives.

South Asia is in the grips of a triple crisis, extreme levels of poverty, sea-bed levels of malnutrition and food price inflation that has been consistently high, higher than in any other part of the world. Despite



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the region being sunlight surplus, with abundance of coast-lines and cheap labour, there has been no resultant prosperity or nutritional dividends that would be expected in the region. In fact, India's Vitamin D deficiency, in spite of its abundant sunlight, has been termed as a conundrum by scientific journals and mainstream media think-pieces.

A new report from the Asian Development Bank (ADB) makes important points about the nature of poverty in Asia and how this widely used

measure is inadequate to capture it. At least three more elements should be factored in: the costs of consumption for poor people; food prices, which have been rising much faster than the general price level and vulnerability to natural disasters, climate change, economic crises and other shocks.

The \$1.25 poverty line has been questioned by many observers and it is good that the ADB has joined this chorus. This line is quite arbitrary – it is simply the average value (in PPP or purchasing power parity terms) of national poverty lines of the world's 15 poorest countries. Most of these are in Africa, with only Tajikistan and Nepal included from Asia. In 2008, the World Bank revised its global poverty line from \$1.08 to \$1.25 using rates from 2005; it continues to use the 2005 PPPs. The \$1.25 poverty line is below the national poverty lines of most developing Asian states. According to the ADB, only Afghanistan has a lower line (at \$1.24) while 19 countries have lines set at or above \$1.50 and 12 have lines at or above \$2.

The ADB has taken the average poverty lines of the nine least developed countries in Asia and the Pacific (Afghanistan, Bangladesh, Bhutan, Cambodia, Laos, Nepal, Pakistan, the Solomon Islands and Tajikistan). This yields a poverty line of \$1.51 at PPP exchange rates and sharply increases the estimate of poverty in the region. Using this line, average poverty rates for 2010 increase to 30.5 per cent from the earlier estimate of 20.7 per cent; an increase of nearly half, which increases the number of poor people in Asia by 343 million. Those who are vulnerable to such climate change and economic shocks can fall into extreme poverty as a result, which means vulnerability should

*The Guardian* report titled 'Why Asia is Probably Poorer than We Think' by public intellectual and heterodox economist Prof Jayati Ghosh highlighted: "The first target of the first Millennium Development Goal is to halve extreme poverty. It has been interpreted in terms of income poverty alone, relying on counting people living below the arbitrary global poverty line of \$1.25 per day. According to this measure, there has been a global reduction of income poverty that indicates the target has already been met. Most of this is due to rapid poverty reduction in Asia, especially East and South-east Asia and more recently in South Asia, so it is generally felt that the region is a success story. But does this rather basic measure leave out some important aspects of poverty?"





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## Once vulnerability is incorporated, China's poverty rate increases from the 16 per cent benchmark (\$1.25 poverty line) to 32 per cent in 2005 and from 12 per cent to 29 per cent in 2010

also be incorporated into the recognition of the incidence of poverty.

The ADB estimates that 418 million people – or an additional 12 per cent of Asians – were vulnerable to poverty in 2010. The absolute number of vulnerable people has increased over time, rather than fallen. The results for China are particularly striking: once vulnerability is incorporated, its poverty rate increases from the 16 per cent benchmark (\$1.25 poverty line) to 32 per cent in 2005 and from 12 per cent to 29 per cent in 2010. Many other Asian countries show large increases, with poverty rates higher than 50 per cent for Bangladesh and Nepal and 40 per cent for India.

All this forces us to look more closely at Asia's "exceptional" track record in poverty reduction. If we revise \$1.25 to a more realistic \$1.51 and try to account for food insecurity and rising vulnerability, the estimated poverty rate increases to 49.5 per cent in 2010. This means there were almost 1.75

billion extremely poor people in Asia in 2010, not the 733 million reported. Clearly, there is no cause for complacency about poverty reduction in Asia. That this prevalent poverty also has manifestations via inter-generational malnutrition is no surprise.

Unlike other developing countries, high economic growth has not lessened the depth of food insecurity and malnutrition in SAR countries. Even rising household incomes do not guarantee adequate nutrition; among the richest quintile in India, 64 per cent of pre-school children are iron deficient and 26 per cent are underweight. Such malnutrition, by limiting an individual's capacity to provide for himself, is estimated to decrease lifetime earnings by 10 per cent. Even in this high-growth environment, the potential GDP loss estimates range as high as three per cent for SAR. This phenomenon, described as the "South Asian Enigma", refers to the persistence of malnutrition despite high economic growth. This is particularly







puzzling since growth has translated into greater Food and Nutrition Security outcomes in other developing countries; Thailand, for example.

This vast and seemingly intractable problem of food insecurity and malnutrition is drawing political attention in South Asia, with former Prime Minister of India, Manmohan Singh, saying that it is a “curse that we must remove”. Other leaders in the region have also expressed similar serious concern about the effects of sharp rise in food prices on the poorer sections of the population. Food inflation has been dubbed as the worst form of regressive taxation by the earlier International Food Policy Research Institute (IFPRI), South Asia head and Commission on Agriculture Costs and Prices (CACP) chair for India, Dr Ashok Gulati. India has been a case of run-away food inflation for over seven years, which has had direct knock-on impact on household diet diversity, protein intake, nutrients in terms of food and real income.

The challenge of hunger and malnutrition in South Asia is complex and multi-faceted but luckily pathways to solution exist within a variety of cross-sectoral interventions. As such, this will require a

multi-pronged approach, including interventions for: greater availability of food through improved agricultural production, enhanced livelihoods for secure access, education for improved food utilization, clean water and sanitation for improving health and nutrient uptake, women’s empowerment and social protection for an equitable distribution of food resources, and a focus on infant and child care, amongst other relevant interventions.

The increased attention is manifest with many tractions:

- The State of Food and Agriculture Report, 2013.
- Re-positioning malnutrition within the agriculture context and the development deficit discourse. Malnutrition in all its forms – undernutrition, micronutrient deficiencies and overweight and obesity – imposes unacceptably high economic and social costs on countries at all income levels.
- Food systems for better nutrition argues that improving nutrition and reducing these costs must begin with food and agriculture. The traditional role of agriculture in producing food and generating income is fundamental but agriculture and the entire food system – from inputs and





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## South Asia will need to find new ways to meet regional food needs that ensure environmental sustainability, economic opportunity for smallholders and greater productivity

by a Southern institute granted by UK Aid; LANSA (Leveraging Agriculture and Nutrition in South Asia) to carry forward the research, advocacy and public-policy loop in the region in direct response to the challenge of malnutrition and erratic production trends.

- A roadmap, a pathway through a LANN from the 12th Five Year Plan to post-2015.

It is clear that South Asia will need to find new ways to meet regional food needs, that ensure environmental sustainability, economic opportunity for smallholders and greater productivity - all in the face of an increasingly unpredictable climate. Dr Shenggen Fan (2013), director general, IFPRI, explains six key steps that can help to create a sustainable pathway to food and nutrition security in Southeast Asia as follows:



production, through processing, storage, transport and retailing, to consumption – can contribute much more to the eradication of malnutrition.

- Country governments like India prioritizing nutrition sensitive agriculture in budgetary and planning processes.
- Call for Zero Hunger by the U.N. Secretary General, Ban Ki Moon, and the G-8 summit at Ireland in response to the “Enough Food IF” campaign.
- Global Conference on Women in Agriculture, which was the first of its kind, hosted by India in 2012, co-sponsored by all the Consultative Groups on International Agricultural Research (CGIAR) institutes, providing a platform for celebrating the role of women, their role in agriculture, the centrality of household food and nutrition management.
- Launching of the multi-donor trust fund initiative: SAFANSI (South Asia Food and Nutrition Security Initiative) specifically to encourage cross-sectoral, trans-disciplinary platforms to tackle the South Asian enigma.
- The first Research Promotion Consortium led

- Encourage nutrition-sensitive food production.
- Implement resource-efficient technologies to boost agricultural productivity, especially among smallholders, while reducing the use of essential resources like land and water.
- Develop “triple win” solutions to climate change: new investments and policies are needed to simultaneously boost productivity; reduce greenhouse gas emissions from agriculture; and increase farmers’ ability to adapt to climate change.
- Promote agricultural diversity, expanding beyond rice to include high-value products such as fruits, vegetables and animal-sourced products.
- Strengthen agricultural trade and markets.
- Build partnerships among governments, the private sector and farmers’ organizations.

While working with same broader objective ‘To End South Asian Enigma’, a multi-country multi-institutional research programme consortium like



## 'LANN'ing South Asia

Linking Agriculture, Natural Resource Management and Nutrition (LANN) is a systemic approach with multi-sectoral optics to the issues of food production, processing, management and consumption for optimal nutritional outcomes. This is located within the principles of sustainable agricultural practices and harmony with the local eco-system. The knowledge of LANN is on an epistemological curve with new research, new thesis still emerging and the practice is still evolving. Dedicated knowledge and systems' institutions are now locating it within the context of public policy and consumer behaviour too considering what is produced is also determined by what is demanded for consumption. Similarly, public policy has an over-arching impact on all aspects of LANN such as agriculture, nutrition and natural resources (their conservation or erosion).

Food systems encompass all the people, institutions and processes by which agricultural products are produced, processed and brought to consumers. They also include the public officials, civil society organizations, researchers and development practitioners who design the policies, regulations, programmes and projects that shape food and agriculture.

Every aspect of the food system influences the availability and accessibility of diverse, nutritious foods and thus the ability of consumers to choose healthy diets. The linkages from the food system to nutritional outcomes are often indirect though, mediated through incomes, prices, knowledge and other factors. Worse, food system policies and interventions are rarely designed with nutrition as their primary objective making their impact difficult to trace and leading researchers to sometimes conclude that food system interventions are ineffective in reducing malnutrition.

In contrast, medical interventions, such as vitamin supplements can address specific nutrient deficiencies and their impact is more easily observed. They cannot, however, fully substitute for the broader nutritional benefits offered by a well-functioning food system. Every aspect of the food system must align to support good nutrition; any single intervention in isolation is, therefore, unlikely to have a significant impact within such a complex system. Interventions that consider food systems as a whole are more likely to achieve positive nutritional outcomes.



Agricultural productivity growth contributes to nutrition but must do more: It does so through raising incomes, especially in countries where the sector accounts for a large share of the economy and employment and by reducing the cost of food for all consumers. It is, however, important to realize that the impact of agricultural growth is slow and may not be sufficient to cause a rapid reduction in malnutrition. Maintaining the momentum of growth in agricultural productivity will remain crucial in the coming decades as production of basic staple foods needs to increase by 60 per cent if it is to meet expected demand growth.

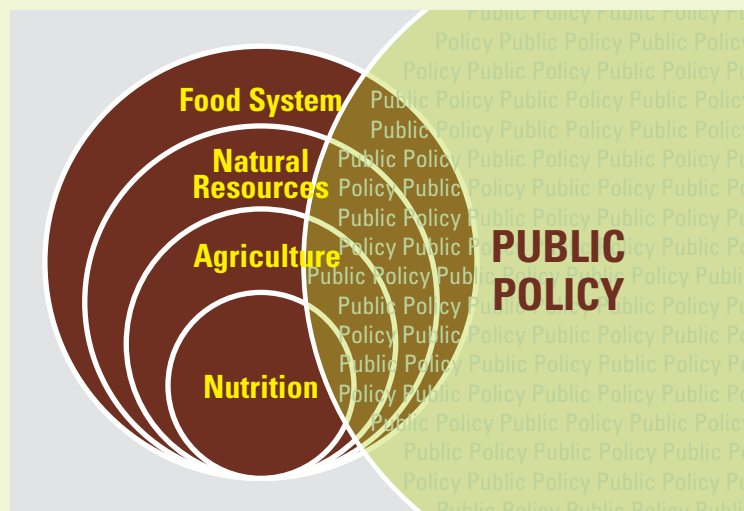
Beyond staple foods, healthy diets are diverse, containing a balanced and adequate





systemic approach and tackle the core, periphery and the super-structures together and LANN needs to be approached through the following optic:

Welt Hunger Hilfe (WHH), has some interventions



and practices on LANN in South-east Asia and South Asia. Per WHH interventions, LANN has four pillars of interventions:

- Linkage between agriculture and nutrition.
- Linkage between natural resource management and nutrition.
- Linkage between income generation/markets and nutrition.
- Linkage between food consumption and nutrition.

A fifth optic should be added: linkage of public policy to improved nutrition (harnessing positive externalities, which could mean getting millets into the public distribution system, network in India or the expansion of PDS to high value commodities with higher nutrient content such as pulses and edible oils)

The outcomes of the LANN approach are manifold as variously researched and documented such as:

- Improved nutritional outcomes.
- Good health.
- Productive agriculture
- Harnessing natural resources and conserving the same.
- Better educational outcomes.
- Impact on poverty alleviation.

In times of restless despair, one looks for sign of hope and as Lawrence Haddad says, “Children can’t eat ideology; all sides need to engage”. The LANN approach needs to be co-constructed with this vision of engaging various collective aspects.

combination of energy, fat and protein, as well as micronutrients. Agricultural research and development priorities must also be made more nutrition-sensitive, with a stronger focus on nutrient-dense foods such as fruits, vegetables, legumes and animal-source foods. Greater efforts must be directed towards interventions that diversify smallholder production, such as integrated farming systems. Efforts to raise the micronutrient content of staples directly through biofortification are particularly promising. Agricultural interventions are generally more effective when combined with nutrition education and implemented with sensitivity to gender roles.

Hence any discourse on LANN needs to take the

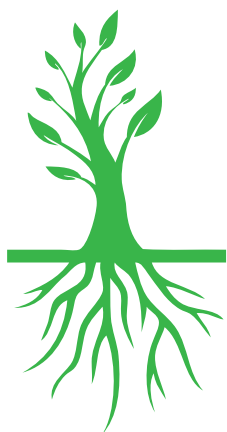
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## The green revolution might have responded to the food production and deficit challenge. The collateral damages it has unleashed have forced a re-look at the challenge



LANSA and SAFANSI seeks to contribute new knowledge on this core issue for development policy and practice. The consortium's overarching aim is to understand the links between agriculture, economic growth and nutritional outcomes and find ways to address the problem of malnutrition effectively.

However, all these developments notwithstanding, the challenges are multiple. The June 2013, special issue of *Lancet* on malnutrition has focused on the enormity of the challenge and the need for concerted, inter-sectoral, transdisciplinary action. Prof Lawrence Haddad, one of the foremost names in malnutrition and agriculture studies globally, makes a case for the need to step up the outrage. He succinctly summarizes the challenges staring us on the face with the burden of malnutrition and a broken food system. Unambitious targets with no zero-base ambitions like poverty eradication, further aggravates the issue. The political nature of malnutrition, needs recognition and engagement with a political lens.

Similarly, towards the end of 2012, a bouquet

of researches by Andrew Jones and Pers Pinstrip Anderson, Bread-of-the-World-Institute and IFPRI made a case for nutrition sensitive agriculture practices and policies and converged on the challenge of inadequate knowledge on how to make it happen in the political economy of the most afflicted national governments and how to incentivize the same.

While the green revolution might have responded to the food production and deficit challenge in South Asia and elsewhere, the collateral damages, environmental costs and decimation of traditional, sustainable agriculture practices that it has unleashed, has forced farmers, practitioner-thinkers and public policy-makers to re-look at the challenge from a coherent approach. Agro-climatic zones, natural resources' and sustainable agriculture practices are being re-coupled back to address the issue holistically. Linking Agriculture Nutrition and Natural Resources thus needs to go beyond thought experiments and research labs. It has to be a farmers' fields, politics and streets issue! ●



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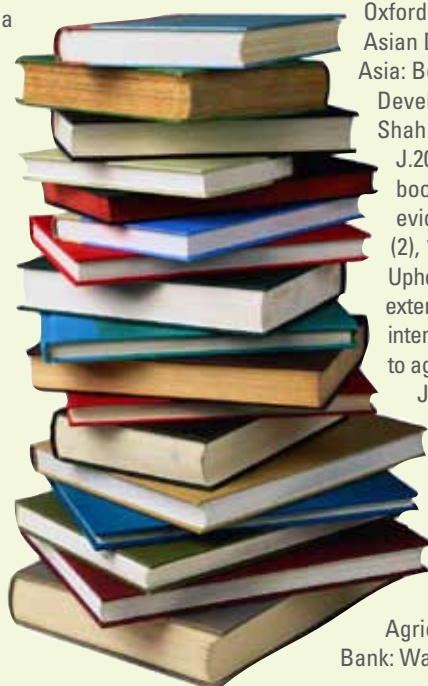
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# Pre-Budget Memorandum

*From Bharat Krishak Samaj*



- ❖ Raise agriculture research & development to one per cent of the sector's GDP moving towards achieving two per cent in the next few years.
- ❖ Agriculture extension services have collapsed. Announce a five-year plan to appoint one agriculture graduate as extension worker for every six villages; create one lakh jobs.
- ❖ Provide a soil card for every plot of land in the country.
- ❖ Provide 10 times more funding for propagating organic practices, integrated pest management, bio-pesticides and bio-fertilizers. Initially, target 10 per cent replacement and more later.
- ❖ To increase production of perishables, select four districts every year for the next five years. Choose districts (preferably backward areas) with the ideal combination of weather, soil and water availability. Integrate all food related government programmes to these areas.
- ❖ Additionally, direct small farmers, agri-business consortium and the National Dairy Development Board (NDDB) to jointly launch a mission to grow, store and for controlled distribution of onions, potatoes and tomatoes.
- ❖ Specially focus on fodder. Require a 'Fodder Seed Mission'.
- ❖ Start a 'Sugarcane Development Board' like the National Horticulture Board.
- ❖ Emphasise 'Agro Forestry' for income generation and increasing forest cover.
- ❖ Fund indigenous breed artificial insemination standardization, regulatory programme so that all farmer families can own good milk animals and provide doorstep vet services.
- ❖ Fund a white revolution across India. First target doubling milk yield of indigenous milk cattle.
- ❖ Fund *Gaushalas* with the condition that 40 per cent of total animals in their keep be male cattle.
- ❖ Start a 'Livestock Mission' for indigenous breeds where insurance premium is paid by government depending on milk yield.
- ❖ Review all under implementation irrigation projects and proposed projects. Scrap unfeasible projects.
- ❖ Do not invest in new large projects like inter linking of river basins. Instead fund repair and maintenance of all existing irrigation infrastructure projects, lining of all canal and provide drainage for existing irrigated areas.
- ❖ Do not fund flood irrigation projects, incentivize micro irrigation as infrastructure investment.
- ❖ Fund one million small water storage reservoirs.

- ❖ Distribute soil moisture measuring sensors to all farmers.
- ❖ Allow import of agriculture machinery (not tractors) at zero per cent duty without restrictions.
- ❖ Incentivize collective ownership of farm machinery and leasing. All incentives for individual ownership of farm machinery including tractors must be withdrawn. Give interest free loans to co-operative societies/farmer producer organizations to purchase farm machinery repayable over three years to lease services to farmers.
- ❖ Fund increasing the number of agriculture market yards – *mandi* – by 50 per cent and provide full infrastructure in all existing agriculture market yards.
- ❖ When funding urban renewal, make it mandatory



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for cities to allocate space for specific number of farmer markets/Sunday markets in residential areas.

- ❖ Impose no restrictions on export of agriculture produce. Need long term Agriculture Exim policy. Ad hoc discretion by government must end.
- ❖ Charge maximum permissible import duty on fresh fruit and vegetables.
- ❖ Impose hefty import duty on imported cooking oil. Incentivize local production.
- ❖ Allocate more funds for Indian metrological department specifically for improving medium term weather forecasts for agriculture.
- ❖ Move to a regime of risk mitigation measures







where government pays 50 per cent premium for weather and price insurance for all crops.

- ❖ Allow 10 times increased funding for data collection and assessment.
- ❖ Double number of loans of up to ₹2 lakh given to farmers and for that charge one per cent interest only. Subvention is not helping, do away with it.
- ❖ Agriculture lending figures are dubious to a great extent. Corrective measures need to be announced so that credit does reach actual farmers.
- ❖ Set up a Debt Recovery Tribunal type of authority for farmers to resolve loan disputes.
- ❖ Ensure timely release of fertilizer subsidy to manufacturing units, but review how subsidies are calculated for the fertilizer sector to plug policy loopholes of excess payments.
- ❖ Discrimination in policy - towards fertilizer co-operatives must end; extend scope of Section 115BBD, allow investment allowance to co-operatives similar to private manufacturing sector and allow them the flexibility of automatic route borrowings like companies.
- ❖ State and Central Co-operative Banks must be supported to meet Minimum Capital Adequacy

Norms by capital infusion or else co-operative banks will fail.

- ❖ Interest subvention of two per cent in providing short term agri loans is not available on refinance portion of National Bank for Agriculture and Rural Development (NABARD) to such banks. Provide interest subvention on refinance portion.
- ❖ NABARD should refinance these banks @ 2.50 per cent as applicable at inception of scheme.
- ❖ Plan to make subsidies inversely proportional to size of land holding. Any direct subsidy transfer to farmers can be a positive development provided farmer interests are not sacrificed before implementation.
- ❖ Central ministries of rural development, agriculture and irrigation can be transformed into one powerful ministry.
- ❖ To improve governance and ease of doing business appoint a 'National Food Security Advisor' like the National Security Advisor to monitor, assimilate and co-ordinate programmes between different departments, ministries and state governments so that there is delivery at the grassroots. ●





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# Omissions, Commissions but Whither Remission of Farm Woes

**Bhavdeep Kang**

Six months into its term, the National Democratic Alliance (NDA) government has signalled sweeping changes in India's food economy, which will profoundly impact both producers and consumers. Four significant policy moves indicate the shape of things to come:

- Permitting field trials of genetically modified (GM) crops.
- Discouraging state governments from giving farm producers a bonus over the minimum support price (MSP).
- Setting up a committee on reforming the Public Distribution System (PDS).



**BHAVDEEP KANG**  
Senior journalist  
specializing in land  
and farm issues

- Last but not the least, notifying the Land Acquisition Ordinance on December 31, 2014.

In July last year, the GEAC or Genetic Engineering Approval Committee – a rather controversial body – approved field trials of 13 GM crops including mustard, brinjal, rice and chickpea. The government then passed an order giving field trials the green signal. On August 21, the University of Delhi was given permission to conduct trials of

GM mustard and brinjal. Outraged, two Rashtriya Swayamsevak Sangh (RSS) frontal organizations – the Swadeshi Jagaran Manch (SJM) and Bharatiya Kisan Sangh (BKS) – told environment minister,





Prakash Javadekar, that this was not on.

Javadekar, cowed, hedged a bit but on November 26, 2014, he declared in Parliament: “The Union government is of the view that research in GM and confined field trials for generating bio-safety data with all due precautions should be allowed to continue in the national interest”. Banishing any lingering doubts about the NDA government’s commitment to GM food crops – which the BJP’s election manifesto vehemently opposed – its ‘Make in India’ website touted India as a GM destination: “India has the potential to become a major producer of transgenic rice and several genetically modified or engineered vegetables”.

Agriculture, however, is a state subject and a no-

objection from the concerned state government is necessary before field trials of GM crops can be conducted. Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, West Bengal, Odisha, Tamil Nadu, Kerala, Andhra Pradesh and Telangana have refused permission for field trials. Uttar Pradesh will not allow field trials for food crops. Since four of these are BJP-ruled states, the Centre’s decision to fly in the face of the BJP manifesto is a potential source of conflict between party and government, not to mention the RSS.

Other than environmental pollution and health concerns, objections to GM crops are centred around (1) proprietary seed technologies and (2) displacement of traditional or even hybrid non-





GM varieties – as has happened in the case of Bt Cotton. Today, transgenic seeds are sown in 90 per cent of the land under cotton and regular, less expensive varieties have all but vanished except among organic farmers. Although India does not currently subscribe to the IPR (intellectual property rights) regime in agriculture, there is the ever present fear that it may do so at some future time. This would render farmers using GM seeds – or even those whose fields are polluted by such seeds – liable to prosecution.

An even greater source of angst for the state governments is the Centre's decision to disallow a bonus over and above the MSP for rice and wheat, to producers. In order to motivate farmers to produce more, state governments were promising them a higher price for rice and wheat. For instance, Madhya Pradesh saw a sharp increase in wheat production after it began offering a bonus of ₹100 to ₹150 per quintal on the MSP. In 2013, farmers were paid ₹1,500 per quintal, a hike of 17 per cent over the previous year. The result: Madhya Pradesh became a leading wheat procurement state.

One of the first policy initiatives taken by the current dispensation was to ask the states to discontinue offering a bonus. The ostensible objective was to discourage mono-cropping (if farmers got a good price for wheat, they would not



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## If states that do not undertake their own procurement for the PDS announced bonus, the FCI would not procure in such states, leaving them to mobilize their own resources

grow anything else) and bring down food inflation. The bonus, it was felt, distorts the market and drives away private buyers leaving farmers dependent on the government for sale of their produce.

Thus far, states that procure foodgrain from their farmers and then distribute them through the PDS, could claim a subsidy from the Centre for these operations. This includes Chhattisgarh, Madhya Pradesh, Bihar, Gujarat, Kerala, Odisha, Tamil Nadu, West Bengal and parts of Andhra Pradesh and Rajasthan.

The Food Corporation of India (FCI) was told to procure limited grains from 'bonus' states – just enough to cover the state's own PDS requirement – and to refuse to subsidize procurement and distribution by the state governments beyond this quota. The burden of additional subsidy would have to be borne by the state government: "If

decentralized procuring (DCP) states announce bonus over and above MSP of rice and wheat for this year, the centre will give subsidy only on foodgrain procured as required for PDS and welfare schemes. FCI will decide how much wheat or rice stocks it should procure in a particular season and restrict its central pool procurement to that extent, leaving the rest of the surplus stock to be disposed of by the state government, at its own risk and cost".

If states that do not undertake their own procurement for the PDS announced a bonus, the FCI would not carry out procurement operations in such states, which would then have to mobilize resources and take care of MSP operations in the state on their own, including storage of the procured foodgrain.

Certainly, these measures will bring down the food subsidy bill, which is good news for







taxpayers (if not for farmers) in the short run. In the long term, however, it may create shortages by discouraging producers.

Food policy expert Biraj Patnaik sees the fine hand of economist and former chairman of the Commission of Agricultural Costs and Prices (CACPC), Dr Ashok Gulati, behind the move. An influential voice in the NDA government and member of the committee on PDS reform, Dr Gulati is known for his market-oriented approach.

“Procurement from Chhattisgarh is down 30 per cent this season”, Patnaik observed. Farmers are distressed and their anger is being channelled into public demonstrations. This may well affect the political fortunes of chief minister Raman Singh, who has already appealed to Prime Minister Narendra Modi to rethink the no-bonus policy. “I hear the PM has clearly said he does not want to revisit the issue”, adds Patnaik. He points out that the state makes a huge outlay to sustain its model PDS and cannot do so without the support of the centre.

This brings one to the issue of PDS reforms. While it is acknowledged that the PDS, riddled with

inefficiencies and corruption, is in urgent need of reform, the question is what shape it will take. The government’s committee on PDS reform, headed by former union minister, Shanta Kumar, was to have submitted its report in December last year but has since been given an extension.

Restructuring the Food Corporation of India (FCI) to reduce cost inefficiencies is the committee’s primary agenda. To this end, two major proposals are being considered: (1) Trifurcation of FCI with three separate agencies handling procurement, storage and distribution, (2) Direct cash transfer of food subsidy into the beneficiary’s bank account. Dr Gulati, who has been a proponent of food coupons/cash compensation as a means to reduce leakage from FCI, recently produced a study for Indian Council for Research on International Economic Relations (ICRIER) pointing to increase in transit losses. While the report is not yet in the public domain, press reports quoted it as saying diversion of foodgrain to the extent of 46 per cent was taking place.

Dr Tajamul Haque, former chairman of the





CACP, dismisses Dr Gulati's findings, pointing out that the trend in the last decade has been the other way around. "I do not think the findings can be correct", he says. Since 2005-06, state governments have voluntarily undertaken PDS reforms, using technological fixes to reduce diversion of foodgrain. Chhattisgarh has been the best-performing state in this regard, after Tamil Nadu. Even poor states like Bihar and Odisha have made big strides. This has brought leakage from the PDS down from about 54 per cent in 2005 to 29 per cent in 2013. Dr Haque questions the motive behind the ICRIER working paper. Could it be to justify introduction of cash transfers?

Patnaik observes that procurement from farmers is as much a part of FCI's job as distribution of foodgrains. The producers' interests are to be protected, as much as that of the consumers. Cash transfers cannot be a substitute for procurement from farmers at MSP, as they do not get any other kind of income support. Restricting procurement and leaving producers to the mercy of private traders

will have a negative impact on the farm sector, at a time when farmers' suicides continue unabated.

Among farmers who find agriculture unsustainable, perhaps the best bet is to sell their land at a good price and find an alternative source of employment. This brings one to the Land Acquisition Ordinance of December 31, 2014. The objective of the Ordinance is to undo critical provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act, effective from January 1, 2014.

This Act was intended to right a historical wrong, thereby protecting the interests of landowners. For half a century, the Land Acquisition (LA) Act of 1894 had been used to dispossess land-owners and hand over their property to private parties by stretching the definition of "public purpose". The government had freely exercised its right of eminent domain, to the extent of setting aside right to property (through a constitutional amendment) and legitimizing acquisition of land for private





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that the proposed use to which the land would be put did not adversely affect the local population – after all, who wants a polluting industry in their backyard? It would also ensure that the concerned party or government agency would not acquire more land than needed.

As a result, farmers were protected and by extension, the country's food security. Multi-crop land was exempted from acquisition except in cases of dire necessity. By mandating the majority of farmers consent to the surrender of their land and fixing generous rates of compensation, it reduced scope for exploitation. Small landowners could not be easily dispossessed for the benefit of private industry.

The ordinance turned the clock back to the bad old days of arbitrary acquisition. It did away with the consent clause and the SIA report in the case of housing, industrial and infrastructure projects. It also protects government officials from prosecution if they violate the act. This would, as Congress leader Jairam Ramesh pointed out, open the doors to forcible acquisition of land, ostensibly for public purposes but actually for private operators.

The justification for the Ordinance is that the Act was hampering economic growth and, therefore, national interest. Making it harder for privately-owned businesses and public-private participatory projects to acquire land for factories, housing, shopping malls, hotels and other profit-making

## Landowners were virtually stripped of protection. Villages were uprooted and displaced, farmers given paltry compensation for land their families had tilled for millenia

purposes through a series of amendments. Landowners were virtually stripped of protection. Whole villages were uprooted and displaced, farmers were given a paltry compensation for land that their families had tilled for millenia and were left destitute, with no means of livelihood. Meanwhile, luxurious housing, hotels, polluting factories and shopping malls came up on what had been their ancestral land.

The objective of the 2014 Act was to ensure the farmers received fair compensation for their land. It was also intended to promote participatory governance, by seeking the consent of 80 per cent of farmers to the acquisition (70 per cent in case of public-private partnership projects). Further, a social impact assessment (SIA) report would have to be prepared to ensure

enterprises, the Act was anti-development.

Why, then, did the BJP whole-heartedly support the passage of the bill in Parliament, while it was in the opposition? Given that the Act follows the spirit and letter of the Sumitra Mahajan Committee's report on land acquisition, why the volte face?

No answers are forthcoming. A political fund manager speculates that land is a major source of illicit funds for elections and the new Act interfered with that. A well-established nexus between politicians and businessmen is behind a large number of acquisitions. Say, a businessman wants a particular patch of farmland. Buying it directly from the individual farmers in their hundreds, at market rates, would prove problematic and expensive. Particularly as he would have to ensure change of land use and meet heavy development costs. His







political buddy then instructs a friendly bureaucrat to acquire the land at a low price, develop it and allot it to the businessman.

Another way of doing this is to buy land and then get a politician to change the land use from agricultural to residential or industrial. Prior knowledge of change of land use helps because land can be acquired cheap before the new master plan is announced, increasing its value many fold.

Response to the ordinance has been varied. While economist Mohan Guruswamy feels the consent clause needed to be diluted to 51 per cent – a simple majority – former bureaucrat and farmer activist S. P. Gupta says “there is no need for consent at all, since proper compensation for land has been ensured in the Act and the ordinance does not interfere with that”.

The Congress has already taken up cudgels on behalf of landowners, saying the ordinance is anti-farmer. So the ordinance, which must be legitimized in the budget session, is unlikely to pass in the Rajya Sabha. The government would be forced to call a joint session or re-promulgate the ordinance, both of which are extraordinary, even last resort, measures. ●



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TRIBUTE

THE RICHHARIA ROUTE

# Towards the Other Rice Revolution

Bharat Dogra



*“India is gifted with rice climate where environments favour the growth of the rice plant..... Such a situation offers a great scope to execute any action plan for immediate increase in the productivity of rice, provided it is based on (1) ready availability of resources locally, including the rice varieties and (2) willingness and natural inclination of the farmers to accept it”.*

– Dr R. H. Richharia,

*former director, the Central Rice Research Institute, Cuttack*

Rice is the most important food crop of India and Asia. The challenge is to ensure sustainable increase in rice production and productivity, using ecologically safe methods in a low-cost regime for farmers. This alone can ensure availability of rice for the billions while also ensuring that the livelihoods of small farmers are protected.

Unfortunately, the technologies being pushed into India have failed to achieve these objectives. One basic shortcoming lay in the mid sixties’ decisions to introduce exotic dwarf varieties (HYVs) that were highly dependent on chemical fertilizers and pesticides and, worse, had a very narrow genetic base. This was admitted at an early stage by a task-force on rice breeding consisting of eminent experts and rice scientists that met at the Central Rice Research Institute (CRRI) in Cuttack on February 19-20, 1979.

This task force tried to identify some of the causes of stagnation of rice yields; mainly the narrow genetic base of the exotic rice HYVs; their unsuitability for much of the rice-growing region of India; and their alarming susceptibility to pests and diseases. Some remarks of the task force are worth quoting, (in these quotes HYVs should be taken to mean exotic HYVs).

“Most of the HYVs are derivatives of T(N)1 or I.R.8 and, therefore, have the dwarfing gene of *dee-geo-woo-gen*. This narrow genetic base has created alarming uniformity, causing vulnerability to diseases and pests. Most of the released varieties are not suitable for typical uplands and low lands, which together constitute about 75 per cent of the total rice area of the country. To meet these situations, we need to reorient our research programmes and strategies”.

In a reference to the increased pest susceptibility of the new crops, the task force said: “The introduction of high yielding varieties has brought about a marked change in the status of insect pests like gall midge,



**BHARAT DOGRA**

Author and journalist writing on development, environment, human rights and social issues

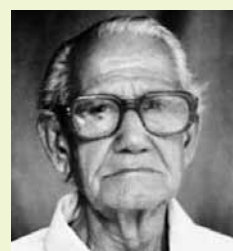
brown plant hopper, leaf folder, whorl maggot etc. Since most of the high yielding varieties, released so far, are susceptible to major pests with a crop loss of 30 to 100 per cent, development of high yielding varieties with built-in-resistance has become highly essential to stabilize the yields”.

Development of pest-resistant varieties is no doubt very important but when it comes to examining the past record in this field, the task force had sad things to tell: “The results of the insect resistance breeding programme so far are not very encouraging.

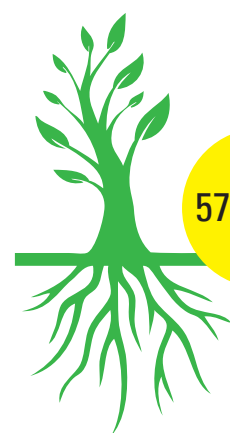
Even though a few varieties have been released as resistant to pests, except Ratna, no other variety is having a good spread in the country. A good stem borer resistant variety is yet to be developed for which a good donor is to be first identified”.

## R. H. Richharia

Dr R. H. Richharia was one of the first farm scientists to obtain a Ph. D from Cambridge. He did so in record time despite being deprived of financial resources.



In 1959, he was appointed director, the Central Rice Research Institute (CRRI), Cuttack. Under his inspiring leadership, by the mid-sixties, the CRRI had emerged as the most important centre of rice research in India and amongst the most important in the world. It was around this period that research relating to a critical technology – clonal propagation of rice was reaching a very important stage under his guidance. The technology being tried held the exciting potential of significantly increasing rice yield based on indigenous rice varieties and rapidly spreading the improved varieties over a very wide area.





Referring to some specific efforts, the task force reported: "During 1977 *kharif*, when the gall midge resistant cultures were grown in new endemic areas – viz. Singeda, Kune and Bandu in Bihar, most of the promising resistant cultures recorded susceptible reaction suggesting possible presence of a new virulent biotype of rice gall midge in these areas".

While disease-related problems were getting much worse, there were no solutions in sight. Referring to the problem of sheath blight, the task force specifically reported: "The disease is now becoming more serious due to the increased plant population density, high tillering and higher nitrogen dose..... so far varieties with a high degree of resistance have not yet been identified".

One may add – to these 1979 findings of the task force – that most of these problems of exotic HYVs persist. These are inherent in the exotic varieties not at all well adapted to the environmental conditions in which these are grown in India. In fact, the government's own data for around 15 years preceding and following the introduction of exotic HYVs clearly shows that huge budgets were wasted year after year as, despite the massive

"A cursory look at the pedigree of the different rice varieties released in India reveals that a very narrow germplasm base is involved. It is also noticed that many times the same female parent is involved in the cross combination."

– Central Rice Research Institute  
Task Force; February 1979

increase in government spending on increasing rice production, the rate of increase of productivity actually declined in the later period.

Between 1965 and 1979, paddy exotic HYVs were spread to 16.90 million hectares. All this increase was accompanied by a higher spending on agri-chemicals and other expenses per hectare. What was the net result? This is summarized in *Table 1* and explained in details in *Table 2*.

*Table 1* clearly reveals that the growth rate of yield of rice declined significantly in the later years (Green Revolution phase) despite the massive increase in farming expenditure (of the government as well as farmers). This is explained in greater details in *Table 2*.

- In the case of paddy, the average yield of the First

## Government data 15 years before and after the introduction of exotic HYVs confirms that huge budgets were wasted and rate of productivity increase declined in the later period

"A sort of rice revolution movement is to be launched to awaken the rice farmers, to become a permanent feature, as a chain reaction, to increase productivity in rice with the least possible delay. The Indian rice farmer (so also the farmers of other South-east Asian countries) is not afraid of manual labour and he is most efficient in rice farming. We have little to teach him by way of agronomy. On the other hand, rice researchers may drive new ideas and get themselves benefited immensely from his practice and culture, provided they get themselves drenched with him (the farmer) in rice soils during the growth period. I have done it. Inherently and intuitively experienced rice farmers of their age acted as rice breeders, responsible for developing and maintaining thousands of rice varieties up to our times".

– Dr R. H. Richharia

**Table 1: Average Annual Growth Rates in Yields per Hectare**

Crop	Pre-Green Revolution	Green Revolution
	1951-52 to 1967-68	1968-69 to 1980-81
Rice	3.2	2.7

Source: 12th Plan Document

**Table 2: Yield of Rice (kgs per hectare)**

Period		Yield of Paddy
1950-51		668
First 5-year Plan (1951-56)	Average	817
Second 5-year Plan (1956-61)	Average	915
Third 5-year Plan (1962-67)	Average	986
Annual Plans (1966-69)	Average	992
Fourth 5-year Plan (1969-74)	Average	1112
Fifth 5-year Plan (1974-79)	Average	1201
1979-80		1082

Table-2 is based on Annexure 9.2 of the 6th Plan Document







Plan years (1951-56) was 22 per cent higher than in 1950-51. During the Second Plan (1956-61) the average yield rose by 12 per cent and in the next plan (1961-66) by eight per cent.

- During the three annual plans (1966-69) the average yield rose by only 0.7 per cent. In the Fourth Plan (1969-74) by 12 per cent and during the Fifth Plan (1974-79) by eight per cent. Compared to the Fifth Plan average, in 1979-80 the yield decreased by 10 per cent.
- Thus on the whole the rate of increase of paddy yield was higher during the first 15 years period.
- If *Table 1* and *Table 2* are seen in the light of the observations of the Task Force, the reasons of the reduction in rise of productivity rate also become quite clear.

“Unlike wheat and sugarcane, the concept of ‘wide adaptability’ in rice has a limited scope for application (not exceeding 10 per cent of the rice area). This has naturally led to local preferences of different types of rices and socio-economic adjustments, developed in course of time. These considerations explain why rice productivity remains unstabilized and stagnant and calculations did not work. When the base is, in itself, weak (meaning the new rice material) a mansion, built on it, must collapse”.

– Dr R. H. Richharia

“This inherent and intuitional faculty of farmers in selection and maintenance of thousands of rice cultivars, gradually being accumulated and descended down for unknown centuries, ever since the rice first originated, must be preserved and exploited for the advantage of the present generation and to ensure the safety of those still unborn”.

– Dr R. H. Richharia

As these problems persisted in the earlier eighties, Dr R. H. Richharia was asked by the Prime Minister’s Office to prepare a plan on sustainable increase of rice production in India. The then Prime Minister Indira Gandhi was very keen about this but the matter was not pursued further after her passing. The plan prepared by Dr Richharia is still available and could provide invaluable for helping rice farmers and rice cultivation in India. The most important aspect of this plan is that it is based on rich diversity of indigenous rice varieties.

Nearly two decades later the CRRI director Dr Richharia recollected the events of those years at a seminar on the ‘crisis of modern science’ held in Malaysia in November 1986 in the following words: “We were systematically proceeding with the work at 11 different centres in India with success. We had just reached the stage to revolutionize rice production but all the centres were closed down and instead HYV programme of IRRI with dwarfing



## The Chhattisgarh Days

Such was the reputation of Dr Richharia's work that the government of Madhya Pradesh (that then included Chhattisgarh) recalled Dr Richharia from his retirement to head the Madhya Pradesh Rice Research Institute (MPRRI) at Raipur and also to function as agriculture advisor to the state government. His work here from 1971 to 1976 was pioneering and of great value, with special reference to preserving and protecting the agricultural heritage of tribal farmers in the form of rich biodiversity of thousands of rice cultivars.

Some of the most exciting rice research work



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in India was done under his guidance in the Chhattisgarh region of Madhya Pradesh. Over 17,000 cultivars of rice were collected from the region, several improved selections were made, several indigenous high-yielding varieties were discovered and an exciting programme for increasing rice production based on this indigenous germplasm was evolved.

This work is best described by quoting the various publications of MPRRI brought out at that time in which the details of this work are given. An important publication by Dr R. H. Richharia in 1977 was titled 'A strategy for rice production to ensure sustained growth in Madhya Pradesh' and the first and foremost fact that he emphasized is

the ready availability of several indigenous high-yielding varieties with yields (obtained at much less expense without chemical fertilizers and pesticides) comparable to or greater than the exotic high-yielding varieties. This greatly significant finding is still not widely known and recognized. He said that during 1975, nucleus seeds of 967 improved cultures under BD (Baronda) series were sent out to different locations (government seed multiplication farms and farmers' holdings) in 17 different districts, mostly tested under normal fertility with no plant protection measures applied.

The results obtained from 11 districts only are presented in Appendices 1 to 5 of A.R.R.C. Note No. 9. The average of 121 entries works out to be 3,984 kg/ha of paddy grain or 2,669 kg/ha. of rice. "In terms of the definition of a high-yielding variety in respect of yield 3,705 kg/Ha, as accepted by the M.P. Agriculture Department, the improved material recommended here can be accepted as high yielding", he said. Comparative high yields observed in some trials have also been explained in the publication including some extremely high yields. "There are many good cultures tested at Seoni Malawa during 1978 which can be quoted to establish that very productive germplasm exists in different parts of Madhya Pradesh which can be utilized in increasing rice yields", the scientist wrote.

This document offers direct proof that the selected material "in the form of Bd: series possesses superior yield potential which can form the basis to increase rice production in immediate future with added advantage that they are palatable and they show resistance to pest and to periodical drought to some extent...They have been bred under no plant protection umbrella. This production potential must be tapped and antagonism against indigenous types has to disappear", said Dr Richharia. He also separately described the already identified indigenous high yielding varieties, early-maturing varieties, drought-resistant varieties, scented varieties, special flavour varieties and such others.

However once again Dr Richharia's work based on indigenous germplasm was rudely disrupted. From 1978 till his death in 1996, he had to continue his work without any official support at a private farm near his residence in Bhopal in the middle of many difficulties. Till his last days he was working on an encyclopedia of rice germplasm of Madhya Pradesh (including Chhattisgarh) in which 20,000 cultivars of rice were listed.



genes was launched suppressing the CRRRI work”.

Dr Richharia lost his job. In 1979, however, the authorities needed to tap his experience again and he was asked to head the task force quoted earlier. In the early eighties, he was asked to prepare a plan on rice by the Prime Minister’s Office. He submitted this plan under the title ‘A silent rice revolution – a specific plan of action for increase in productivity of rice’.

In this plan, he first explained the weakness of the existing efforts and the reasons for their failure. This plan says, “In spite of progressive increased area under irrigation and increased use of high yielding varieties of rice, coupled with increased consumption of chemical fertilizers and pesticides, productivity of rice remains stagnant and unstabilized in recent years. The reason is not far to seek. The main constraint has been the hurried introduction of the undesirable new rice material, the HYVs (dwarfs) on which we based our strategy, replacing even the reputed high-yielding rices of the locality, forgetting at the same time unexpected drought situations, under which the HYVs lowered the yields. In addition, under heavy fertilization and

“For gall midge, even though the donors are highly resistant, unfortunately most of the resistant varieties, released so far in the country, are either poor yielders or do not show consistency in resistance when grown in different locations. Here also high yield and stable and high degree of resistance are yet to be combined”.

– Central Rice Research Institute  
Task Force; February 1979

points in the plan of action to ensure speedy increase in production of rice were:

- “Decentralized and direct approach to the rice farmers and to take them into confidence and associate them fully.
- Working with the farmers with their own rice varieties about which they themselves know enough, so that they feel at home, employing simple field techniques in terms of the latest production technology.
- Creating a sort of movement for increased rice

## In spite of increased area under irrigation and use of high yielding rice, coupled with more consumption of chemical fertilizers and pesticides, rice productivity is stagnant

irrigation the HYVs proved susceptible to diseases and pests, which cannot be controlled easily, thus again pointing towards reduction of yield”.

Avoiding these costly mistakes, Dr Richharia advocated a different path; an action plan for rice that must take into consideration these lapses. “Self-generating economy and building up of local resources alone offer a permanent solution in rice and not the outside support which would always be limited, conditional and uncertain. Local resources would also include forestry and animal husbandry (for farm power and soil fertility) to restore imbalance, being created in the environmental ecosystem in the typical rice areas. Organic and ecological farming with which the farmers are familiar and which they prefer, finds little place in our research and planning process after 1965. Location specific approach alone can help us in increasing productivity, tract-wise, village-wise and individual field-wise”.

He sought to reorient strategy based on his work and experience, keeping in view the recommendations of the rice scientists. The salient

production, including areas where rice is not a major crop, the non-traditional areas, as an additional crop, as a catch-crop”.

Advocating a highly decentralized approach with involvement of farmers, he suggested that as many as possible rural adaptive rice centres be established, as many as possible, all over the country. He said: “...Invariably I found in rice areas some rice growers taking keen interest in their local rice varieties and as they are very much absorbed in them they have all praise for them, so much so that they trace back the history of individual rice varieties to their ancestry with their utility. Such selected and devoted rice farmers will be put in charge of the centres. I also observed that some of them would identify their rice varieties in their own way (not in terms of the modern knowledge of Botany), which amount to thousands”.

He wanted the adaptive rice centres to be “the custodian of all local rice cultivars” in respective localities and assembled immediately, supplemented, if necessary, by the available materials of the locality at different research





## Grassroots Efforts for Indigenous Rice Varieties

Jan Swasthya Sahyog (JSS) is a health initiative in Chhattisgarh that realized from the outset that just as better nutrition is essential for better health, improving agriculture is equally important for improving nutrition. Hence improving agriculture has been an integral part of the efforts of JSS. The agricultural programme of the JSS is based on conserving indigenous varieties, emphasizing ecologically protective and sustainable agricultural practices while maintaining or improving yield, reducing costs of cultivation, improving soil and reducing water use. Experimental cultivation is carried with highly diverse varieties right within the JSS campus.

Hom Prakash, co-ordinator of the agricultural effort of JSS says: "We use SRI technology that emphasizes growing lesser number of plants per acre so that each plant get better nutrition from soil. We do not use any chemical fertilizers,

pesticide or weedicides. Thus the foodgrain and seeds are free from any contamination".

A preparation of Jeevamrut (based on cow urine, cow dung, small quantities of gram flour and jaggery) is used twice every season. Green manure is also used. All inputs are local and low cost. This increases self-reliance of food and farming system.

Nearly 405 varieties of rice are conserved here. Out of these about 50 varieties are grown to provide seeds to local farmers. These include selected varieties such as Vishnubhog, Kasherbhog, Zeeraphool and Dubraj amongst others. Several varieties that use less water and mature in 60 to 100 days are also available such as Naina Kajal, Bhara Bhulau, Gorakhpuri and Khurburi, amongst others.

Seeds of several indigenous varieties are made available to farmers so that traditional seeds that were gradually vanishing from the farmer's field can again find a place there.

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centres. "They will be maintained under their natural habitat to safeguard the future", he said.

An important responsibility of these centres will be to save the invaluable diversity of rice varieties. Dr Richharia pointed out: "It may be of interest to record that during our survey in the Chhattisgarh area we came across rice growers in the remote area, maintaining a large collection of rice varieties, year after year, associated with local customs. This also explains how thousands of varieties are descended down through the centuries. Naturally

such collections served as 'Local treasures,' but, in the absence of an organization to encourage such private endeavours, the valuable rices are fast disappearing, due to deliberate attempts".

This rice-plan also emphasized the importance of identifying the indigenous HYVs and using clonal propagation technology. Above all, Dr Richharia emphasized the importance of farmers' wisdom and said that scientists should be willing to learn from them. That would revolutionize rice production in the country.

"A sort of rice revolution movement is to be launched to awaken the rice farmers, to become a permanent feature, as a chain reaction, to increase productivity in rice with the least possible delay. The Indian rice farmer (so also the farmers of other South-east Asian countries) is not afraid of manual labour and he is most efficient in rice farming. We have little to teach him by way of agronomy.

On the other hand, rice researchers may drive new ideas and benefit immensely from his practice and culture, provided they get themselves drenched with him (the farmer) in rice soils during the growth period. I have done it. Inherently and intuitively experienced rice farmers of their age acted as rice breeders, responsible for developing and maintaining thousands of rice varieties up to our times". ●



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# Making the Organic Mantra Work

**Ajay Vir Jakhar**

I am back in Germany in January of 2015 and I walk into a warm winter that follows the hottest summers that the world has experienced in centuries. The International Green Week in Berlin is a melting pot of food and culture, where the focus is on the bio-economy. One of the stalls that I visit is from Bavaria, selling what two Germans by the name of Arjun and Annupurana tell me is Sanathan Dharam food: organic and tasty!

The next day is a bright, clear day with lots of sunshine and the air as crisp as the morning mountain air can be. The German farmers association Deutscher Bauernverband (DBV) drives me to the countryside to visit an organic farm in the village of Brodowin. It lies north-east of Berlin

close to the Polish border. After a drive of just over an hour we are at the lake side 1,250 hectare (ha) farm. It is possibly the biggest certified by Demeter, an organic certification organization that maintains the most exacting standards of organic certification. I wished that India too had such exacting standards because organic certification in the country needs more credibility.

We are met by Mrs Poinke, our guide for the day. The farm is a huge operation with more than 500 cattle. Of these some 225 cows give milk at a time and the average production is 7,500 litres per cow annually. Impressive though this is, the quantity could have been more had the cattle been fed cereals only. Cereals alone are obviously not ideal feed. The rules of organic certification require that animals be given a complete feed that includes different grasses. This, I am told, reduces the quantity of milk produced but improves the quality.

Such humane agriculture costs more and customers must be ready to pay more. Farmers are not allowed to cut animal horns any more. The company pays €4,000 a year as annual organic certification charges



for just the primary production of this farm. Also 0.1 per cent of the total turnover is given to Demeter for research and coming up with new ideas.

Walking on the slushy, grassy path with trees bare of leaves, I figure that life is tough for farmers here but made easier, I am told, courtesy the direct income support of €250 per hectare. The support can vary depending on various criterion. Organic farmers also get additional premium from the rural development subsidy of €130 per hectare. As this farm is situated in a biosphere reserve it makes even more sense to do so.

Till date, support is proportional to the total size of the holding. That will change soon with a complex formula whereby larger farms will get progressively lesser subsidy as size of the holding increases. This is on the lines of what the Bharat Krishak Samaj has been advocating for India even though it upsets large farmers who insist that they create more jobs and have greater area to look after environmentally. I am not sure if these are the only support – called subsidies – being made available to farmers but they sure are well looked after.

We are in former East Germany, where land holding sizes are larger. After the reunification, this original 8,000 ha farm got divided between different land owners. The total collapse of the controlled economy led to land being left fallow for some time. Then some 70 or 80 landowners got together to form a co-operative operation that failed. After various experiments with business models, the farm owners chose to rent out the land to a family from Berlin to run the operations a few years ago. The 20 land owner farmers who leased land to the company also work for it but not necessarily in the farm operations that form only a small part of the business.

There is a limit on how much milk each farm can produce but this is going to end in April 2015 and farmers will be free to produce the quantity they wish to. Sometimes our wishes come true and the choice we make can be very expensive. The

**Life is difficult but price of organic milk that sells for 50 cents a litre has not fallen. The cost of milk production has also increased substantially**

price of milk is down 30 per cent to 27-28 cents per litre today. Life is difficult but price of organic milk that sells for 50 cents a litre has not fallen. The cost of milk production has also increased substantially as the law mandates more space per animal.

Each cow has four markers. Earlier the EU mandated only one marker but some farmers started to cheat the system for more support. The EU then mandated two markers, one in each ear. The yellow ear markers look like ear pieces. The cow also has a collar with its identification number or name. A chip in one of its hind legs is used to record other parameters like health.

A week old calf is kept with the mother before it is shifted to a small igloo where it stays for a week and then transferred to a bigger enclosure. It is only fed cow's milk for 100 days as per organic certification rules. Why do they not allow just the calf to feed directly from the mother for 100 days as in India? I wonder.



Yellow EU ear markers on cattle





From (L-R) Ms Stephanie Franck, Mrs Poinke, Mrs Ursula Holzhauser, Mr Christian Gaebel

The company delivers an 'Organic Box' regularly to 1,500 client homes every week while it sells to 2,500 customer's directly. Customers can place orders on the internet. Earlier the Organic Box would have a fixed quantity of produce. Initially, the customer would have no choice on what to order but now the farm has expanded operations to include organic produce from, practically, all over the world. This allows the company to accept specific orders from customers.

In fact, the farm is a profitable one as a marketing enterprise with a door delivery model and can exist only because of its proximity to Berlin. Also, 90 per cent of the earnings come from sales in Berlin alone. Organic produce is 30 per cent more expensive than that from conventional farms. Expanding economies and increasing prosperity will lead to more demand for organic produce in India too. Of the produce sold, 20 per cent is from their own farm while 80 per cent is procured from elsewhere; 10 per cent of it is sold in the box while 30 per cent of the profit comes from the Organic Box. Looked at from another angle, 30 per cent profit is derived from primary framing, 30 per cent from transformation of primary farm produce and 30 per cent from organic door deliveries.

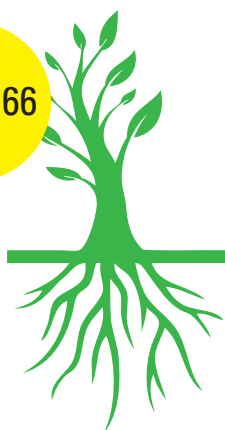
The farm creates one job per 100 ha of land for primary operations, which is usually the same for conventional farming. In order to create more jobs, the farming operations became more intensified and the farm had to diversify. From one hectare in 1994 to 25 ha now, the farm has also diversified into vegetables. Diversification to transformation,

what we in India would call food processing, has helped increase the range of products sold and profits substantially.

The farm also made two additions in the last five years: goats and hens. Goats are very pretty to look at, the pens which have large pieces of wood and cut trees scattered are all over; like a play area for children. Now-a-days there is more demand for goat milk as cow milk does not suit all old people. Goat cheese is very popular too. The farm has 200 goats and 20 goats supply as much milk as one cow. The hens are scattered in the village in mobile stables. Eggs are collected every day.

Milk stays good for no more than nine days. Only what has been pre-ordered is sold as milk and the rest is transformed into various milk products like the most delicious cheeses and yogurt drinks. Pasteurization is necessary but homogenizing of milk is not allowed under organic practices. The state-of-the-art processing facility features a glass-walled enclosure that permits a view but prevents entry to maintain hygiene.

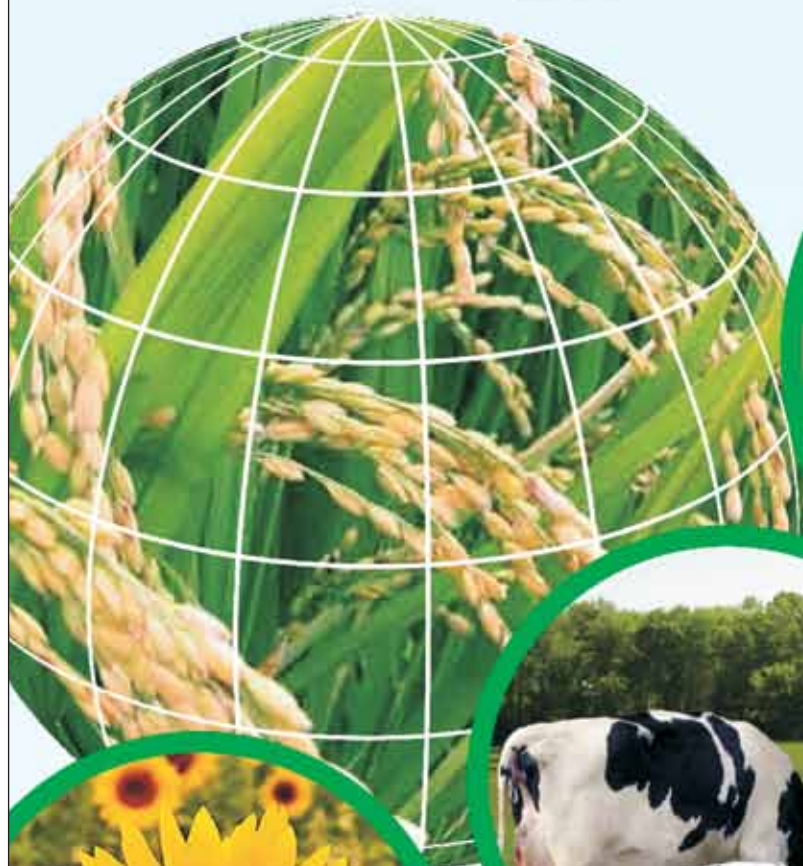
Hundreds of small things make organic standards more difficult to meet but, primarily, going organic is a matter of changing mindsets. It is not only due to perceptions of the urban elite that farmers and the agriculture industry face an image problem but also due to the indiscriminate use of chemicals on the farms that is leading to the inevitable backlash. This holds as true for Germany as for India. However, while image can wait, there is a desperate need to change farming ways to better agriculture. We have to act or we will all sink together. ●





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